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TWENTY-SIXTH ANNUAL REPORT

OF THE

4571

(25)

DEPARTMENT OF MARINE AND FISHERIES

FISHERIES

1893

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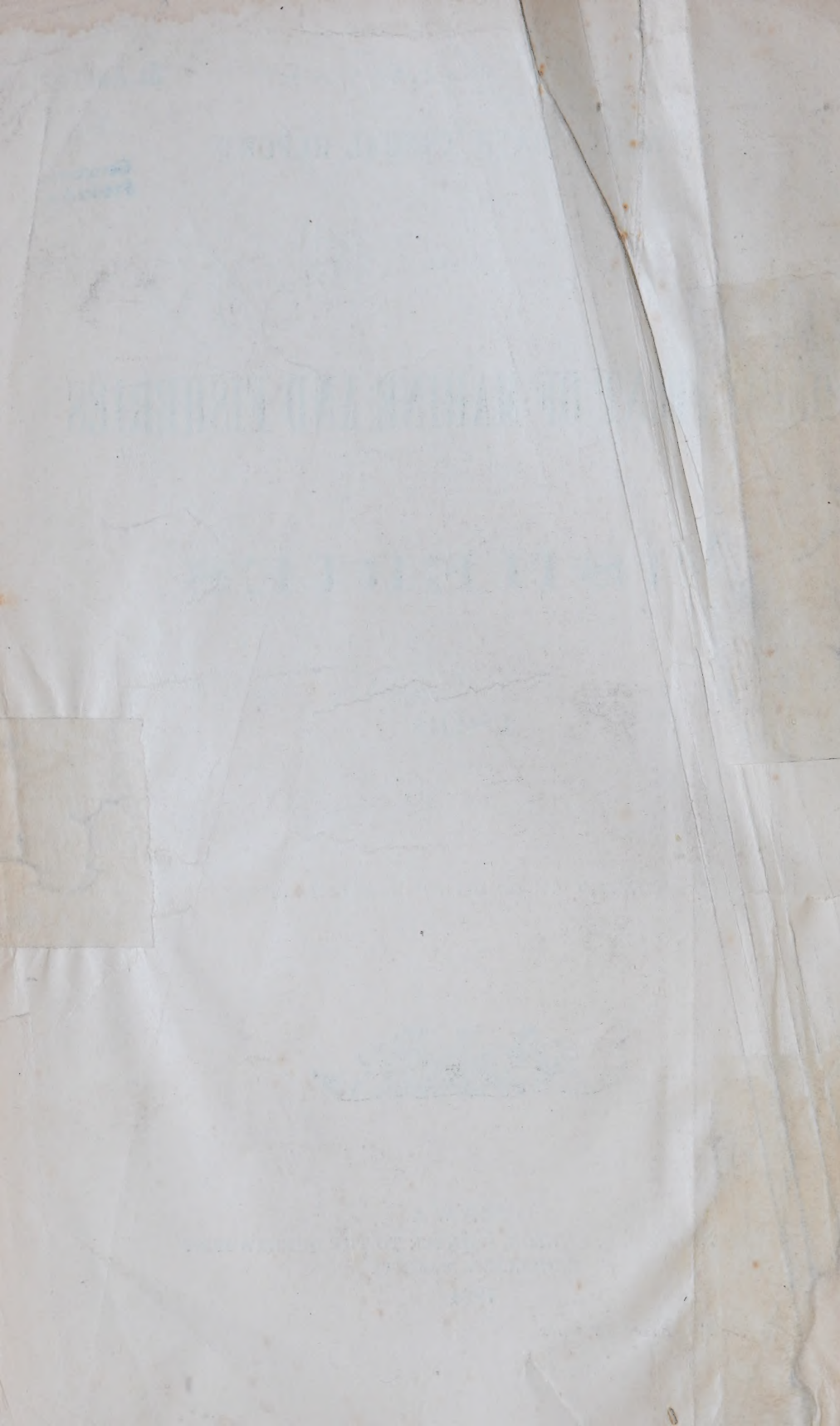


OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY

1894

*—1894] Price 35 cents



*To His Excellency the Right Honourable Sir John Campbell Hamilton-Gordon, Earl of
Aberdeen, Governor General of Canada, &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY :

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Twenty-sixth Annual Report of the Department of Marine and Fisheries, on the Fisheries of the Dominion.

I have the honour to be

Your Excellency's most obedient servant,

CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,
OTTAWA, 1st April, 1894.

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REPORT

OF THE

DEPUTY MINISTER.

To the Honourable

Sir CHARLES HIBERT TUPPER, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to report on the transactions of the Fisheries Branch of this department for the fiscal year ended the 30th June last, and to give an account of a portion of the business up to date.

This report contains statements of expenditure, receipts, a report on Canadian Fishery Exhibits at the World's Fair, Chicago, and treats of fishing bounties, oyster culture, artificial fish drying, fisheries of the great lakes, whitefish, close season on the River Detroit, International Fisheries Commission, extracts State laws United States contiguous waters, pound-nets in inland waters, the preservation of the fisheries, fish-ways, the fisheries of British Columbia, extract of a report of a select committee of United States Senate on relations with Canada, the Behring Sea Question, pelagic fur sealing, the Fisheries Protection Service, Fisheries Intelligence Bureau, and fish hatching.

The report also includes notes of a tour of inspection in the Maritime Provinces, suggestions for a Marine Station in the Dominion and other papers by Professor Prince, and the following appendices:—

- No. 1. Schedule of Fishery Officers in the Dominion.
- No. 2. Detailed statement of Fishing Bounty Claims for 1892.
- No. 3. Fishery Protection Service, by acting Commander O. G. V. Spain.
- No. 4. Detailed statement of the Fisheries Intelligence Bureau.
- Nos. 5, 6, 7, 8, 9, 10, 11, 12, Inspectors' Reports.
- No. 13. Fish Culture.

EXPENDITURE.

The subdivision of the expenditure is as follows:—

	Service.	Expenditure		Vote.	
		\$	cts.	\$	cts.
Fisheries		72,314	68	104,900	00
Fish-breeding		47,322	49	48,000	00
Fisheries protective		106,805	39	109,422	50
Fishing bounty		159,752	14	160,000	00
Miscellaneous exp		100,602	14	104,060	00
Total		486,796	84	526,382	50

The details are printed in the Auditor General's report under the proper heading.

In addition to the above, the following summary shows the salaries and disbursements of fishery officers in the several provinces, together with the expenses for maintenance of the different fish-breeding establishments throughout the Dominion:—

Service.	Expenditure	Vote.
	\$ cts.	\$ cts.
Fisheries, Ontario.....	20,116 91	22,000 00
do Quebec.....	11,761 34	16,000 00
do New Brunswick.....	15,721 05	21,000 00
do Nova Scotia.....	19,444 22	20,500 00
do Prince Edward Island.....	2,847 60	4,900 00
do Manitoba.....	2,162 55	4,500 00
do North-west Territories.....	1,770 41	4,000 00
do British Columbia.....	5,490 60	10,000 00
Total.....	79,314 68	104,900 00
Fish-breeding, Ottawa hatchery ..	1,135 88	
do Newcastle do ..	2,697 69	
do Sandwich do ..	7,361 08	
do Tadoussac do ..	3,065 25	
do Gaspé do ..	1,794 08	
do Magog do ..	1,406 09	
do Restigouche do ..	3,072 37	
do Bedford do ..	1,663 92	
do Sydney do ..	644 66	
do Miramichi do ..	2,369 10	
do St. John Riv. do ..	2,619 03	
do Fraser River do ..	3,630 68	
do Bay View do ..	2,736 64	
Building hatchery at Selkirk.....	6,943 35	
General account.....	5,128 67	
Total.....	57,322 49	48,000 00

This expenditure by provinces is subdivided as follows:—

EXPENDITURE.

Ontario.	\$ cts.	\$ cts.
Salaries of officers.....	11,571 19	
Disbursements of officers	7,333 48	
Miscellaneous.....	1,262 24	
Total.....		20,116 91
Quebec.		
Salaries of officers.....	3,025	
Disbursements of officers	3,053	
Miscellaneous.....	1,566	
Total.....		11,761 34
New Brunswick.		
Salaries of officers.....	10,222	
Disbursements of officers	4,212	
Miscellaneous.....		
Total.....		15,721 05

EXPENDITURE—Concluded.

<i>Nova Scotia.</i>		\$ cts.	\$ ct
Salaries of officers.....		12,040 74	
Disbursements of officers.....		7,293 98	
Miscellaneous.....		109 50	
Total.....			19,444 22
<i>Prince Edward Island.</i>			
Salaries of officers.....		2,223 82	
Disbursements of officers.....		564 48	
Miscellaneous.....		59 30	
Total.....			2,847 60
<i>Manitoba.</i>			
Salaries of officers.....		1,215 00	
Disbursements of officers.....		931 38	
Miscellaneous.....		16 17	
Total.....			2,162 55
<i>North-west Territories.</i>			
Salaries of officers.....		923 50	
Disbursements of officers.....		836 32	
Miscellaneous.....		10 59	
Total.....			1,770 41
<i>British Columbia.</i>			
Salaries of officers.....		3,483 32	
Disbursements of officers.....		852 20	
Miscellaneous.....		1,155 08	
Total.....			5,490 10
Grand Total.....			79,314 68

FISH-BREEDING.

		\$	cts.	\$	cts.
<i>Newcastle Hatchery.</i>					
Salaries.....		617	50		
Miscellaneous expenditure.....		2,080	19		
Total.....				2,697	67
<i>Sandwich Hatchery.</i>					
Salaries.....		1,182	00		
Miscellaneous expenditure.....		6,179	08		
Total.....				7,361	08
<i>Tadoussac Hatchery.</i>					
Salaries.....		650	00		
Miscellaneous expenditure.....		2,415	25		
Total.....				3,065	25
<i>Gaspé Hatchery.</i>					
Salaries.....		400	00		
Miscellaneous expenditure.....		1,394	08		
Total.....				1,794	08
<i>Magog Hatchery.</i>					
Salaries.....		600	00		
Miscellaneous expenditure.....		806	09		
Total.....				1,406	09
<i>Restigouche Hatchery.</i>					
Salaries.....		800	00		
Miscellaneous expenditure.....		2,272	37		
Total.....				3,072	37
<i>Bedford Hatchery.</i>					
Salaries.....		973	89		
Miscellaneous expenditure.....		690	03		
Total.....				1,663	92
<i>Sydney Hatchery.</i>					
Salaries.....		401	66		
Miscellaneous expenditure.....		243	00		
Total.....				644	66
<i>Miramichi Hatchery.</i>					
Salaries.....		530	00		
Miscellaneous expenditure.....		1,839	10		
Total.....				2,369	10
<i>St. John River Hatchery.</i>					
Salaries.....		600	00		
Miscellaneous expenditure.....		2,019	03		
Total.....				2,619	03
<i>Fraser River Hatchery.</i>					
Salaries.....		575	00		
Miscellaneous expenditure.....		3,055	68		
Total.....				3,630	68

FISH-BREEDING—*Concluded.*

<i>Ottawa Hatchery.</i>		\$ cts.	\$ cts.
Salaries	700 00		
Miscellaneous.....	438 88		
Total.....			1,138 8
<i>Bayview Hatchery.</i>			
Salaries.....	600 00		
Miscellaneous expenditure.....	2,136 64		
Total			2,736 64
Building new hatchery at Selkirk.....			6,943 35
<i>General Account.</i>			
Salaries.....	3,400 00		
Miscellaneous expenditure.....	2,782 67		
Total.....			6,182 67
Total, Fish-breeding			47,322 49
Total salaries and disbursements of fishery officers.....			79,314 68
MISCELLANEOUS.			
Building fish-ways.....	2,704 35		
Legal and incidental expenses.....	2,705 26		
Canadian fisheries exhibits and Ottawa hatchery.....	757 01		
Expenditure in connection with the distribution of fishing bounties.....	4,671 77		
Survey of oyster beds.....	4,826 10		
Issuing <i>modus vivendi</i> licenses.....	554 92		
Columbian Exposition.....	6,651 81		
Behring Sea.....	74,025 83		
International Fisheries Commission.....	1,018 56		
Prizes for models of fishing boats.....	749 28		
Collecting data respecting fur seals, 1892 and 1893.	1,937 25		
Total.....			100,602 14
Grand Total.....			227,239 31

FISHERIES PROTECTION STEAMERS—1892-93.

<i>Steamer "Acadia."</i>		\$ cts.	\$ cts.
Wages of officers and men	7,613 10		
Provisions	2,296 23		
Fuel	1,893 19		
Repairs.....	1,842 55		
Miscellaneous expenditure.....	1,959 63		
Total			15,604 70
<i>Steamer "La Canadienne."</i>			
Wages of officers and men.....	7,561 03		
Provisions.....	1,924 45		
Fuel	1,649 45		
Repairs	1,153 54		
Miscellaneous expenditure.....	2,600 33		
Total.....			14,688 97

FISHERIES PROTECTION STEAMERS, &c.—Continued.

<i>Steamer "Stanley."</i>		\$	cts.	\$	cts.
Wages of officers and men.....		3,697	63		
Provisions.....		1,141	68		
Fuel.....		1,284	00		
Repairs.....		9	70		
Miscellaneous expenditure.....		575	23		
Total.....				6,708	24
<i>Steamer "Curlew."</i>					
Wages of officers and men.....		5,204	31		
Provisions.....		1,594	89		
Fuel.....		1,720	21		
Repairs.....		6,089	00		
Miscellaneous expenditure.....		1,685	64		
Total.....				16,215	
<i>Steamer "Petrel."</i>					
Wages of officers and men.....		1,783	28		
Miscellaneous expenditure, including contract for construction.....		30,063	45		
Total.....				31,846	73
<i>Steamer "Constance."</i>					
Wages of officers and men.....		5,220	95		
Provisions.....		1,294	82		
Fuel.....		1,447	59		
Repairs.....		1,426	65		
Miscellaneous expenditure.....		2,407	61		
Total.....				12,808	62
<i>Steamer "Bayfield."</i>					
Wages of officers and men.....		428	63		
Provisions.....		174	80		
Fuel.....		434	04		
Miscellaneous expenditure.....		56	36		
Total.....				1,093	83
<i>Schooner "Vigilant."</i>					
Wages of officers and men.....		3,494	69		
Provisions.....		1,284	13		
Fuel.....		49	42		
Repairs.....		722	53		
Miscellaneous expenditure.....		622	98		
Total.....				6,291	75
<i>Schooner "Kingfisher."</i>					
Wages of officers and men.....		2,023	80		
Provisions.....		731	71		
Charter.....		1,962	50		
Miscellaneous expenditure.....		576	67		
Fuel.....		48	47		
Repairs.....		3	69		
Total.....				5,346	84
General account, miscellaneous expenditure.....				4,521	50
Fisheries Intelligence Bureau.....				1,791	49
Total.....				116,917	82
Less—Amount paid for steamer "Constance" by Customs Department.....				10,112	43
Net total.....				106,805	39

FISHERIES PROTECTION STEAMERS, &c.—*Concluded.*

RECAPITULATION.		\$	cts.
Steamer "Acadia"		15,604	70
do "La Canadienne"		14,688	97
do "Stanley"		6,708	24
do "Petrel"		31,846	73
do "Constance"		12,808	62
do "Curlew"		16,215	12
do "Bayfield"		1,093	83
Schooner "Vigilant"		6,291	75
do "Kingfisher"		5,346	84
General account		4,521	53
Fisheries Intelligence Bureau		1,791	49
Total		116,917	82
LESS—Amount paid for steamer "Constance" by Customs Department		10,112	43
Net expenditure, Fisheries Protection Service.		106,805	39

STATEMENT of Fisheries Revenue paid to the credit of the Receiver General of Canada, for the Fiscal Year ended 30th June, 1893.

	\$	cts.	\$	cts.
Ontario, rents, license fees and fines	30,623	09		
Quebec do do	7,471	70		
Nova Scotia do do	6,782	02		
New Brunswick, rents, license fees and fines	7,831	53		
P. E. Island do do	304	10		
Manitoba do do	1,464	68		
N. W. Territories do do	197	00		
British Columbia do do	40,264	00		
Proceeds of sale of speckled trout fry	1,352	75		
Sale of fish from Newcastle Hatchery	1,369	61		
Fines imposed on U. S. fishing vessels	4,686	25		
LESS—Refunds			102,346	73
			3,732	01
			98,614	72
Licenses to U. S. fishing vessels			12,925	60
Total			111,540	32

COMPARATIVE Statement of Expenditure and Revenue of the

	1884-85.		1885-86.		1886-87.		1887-88.	
	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Ontario.....	17,135 98	11,914 37	17,900 74	15,917 62	19,534 01	15,063 57	19,860 52	18,251 25
Quebec.....	13,531 77	3,325 35	13,938 21	2,963 75	14,966 55	3,804 66	13,463 37	5,394 99
New Brunswick.	14,892 87	4,650 16	15,719 36	4,078 10	16,944 87	4,417 52	20,533 20	7,625 64
Nova Scotia.....	17,503 45	2,616 28	17,852 33	2,166 53	18,092 21	1,585 28	18,308 02	3,905 44
P. E. Island	3,028 03	40 00	3,187 73	40 00	4,044 49	128 00	3,402 51	.....
Manitoba and N. W. Territories.	763 00	.....	1,920 73	.....	2,468 25	5 00	2,816 64	819 25
B. Columbia...	1,437 13	365 50	1,878 53	922 50	5,860 72	943 50	3,661 83	6,934 55
Fish-breed'g and fish-ways.....	43,879 82	.....	44,038 80	.....	37,864 22	.....	41,082 04	.....
Fisheries Pro- tective Service.	31,514 07	.....	37,613 30	.....	134,340 12	.....	77,102 98	.....
Miscellaneous...	9,529 44	.....	10,350 43	.....	11,327 77	.....	13,498 56	.....
Totals	153,215 56	22,911 06	164,400 16	26,088 50	265,443 21	25,947 53	213,729 67	42,931 12
Fish'g bounties	155,718 98	.....	161,597 39	.....	160,903 59	.....	163,757 92	.....

Fisheries Department, from 1st July, 1884, to 30th June, 1893.

1888-89.		1889-90.		1890-91.		1891-92.		1892-93.	
Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue	Expendi- ture.	Revenue.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
19,264 98	24,266 06	14,539 87	23,666 96	15,540 30	26,517 70	15,155 83	25,368 90	20,116 91	30,623 09
12,991 63	3,390 79	9,670 94	5,409 81	10,666 98	3,642 14	10,917 36	4,742 76	11,761 34	7,471 70
20,298 00	8,282 88	14,914 95	8,834 35	16,082 77	7,193 69	15,707 98	6,334 83	15,721 05	7,831 53
20,201 09	2,744 23	17,395 24	5,424 95	17,844 19	5,582 65	18,755 86	3,357 42	19,444 22	6,782 02
3,746 69	140 00	3,113 21	302 88	3,242 25	667 00	1,835 65	166 00	2,847 60	304 10
2,848 16	848 00	3,604 70	794 00	3,609 03	1,234 00	3,593 43	1,079 00	3,932 96	1,661 68
4,333 63	6,416 00	3,634 41	11,367 50	4,320 53	12,859 02	6,158 17	8,192 48	5,490 60	40,264 00
41,315 12	352 50	39,126 91	.....	39,496 45	1,286 50	43,957 74	178 00	47,322 49	
69,693 82	.....	64,434 66	1,176 38	83,050 16	1,934 49	93,397 40	.....	106,805 39	
10,912 18	.....	9,313 92	.....	13,382 28	.....	17,449 06	.....	100,602 14	
205,605 30	46,440 46	178,748 81	56,976 83	207,234 94	60,917 19	226,928 48	49,719 39	486,796 84	
149,990 63	.....	149,999 85	.....	165,967 22	.....	156,892 25	.....	159,752 14	

Proceeds of sale of speckled trout fry	1,352 75
Sale of fish from Newcastle Hatchery	1,369 61
Fines imposed on U. S. fishing vessels	4,686 25
	102,346 73
LESS—Refunds	3,732 01
	98,614 72
Licenses to U. S. fishing vessels	12,925 60
	111,540 32

REPORTS OF INSPECTORS OF FISHERIES.

The early date at which this report has to be submitted to Parliament, at the opening of the session, precludes the possibility of giving full statements of the yield and value of the fisheries of the Dominion during the current calendar year, as fishing is still being carried on in many places while the present report is being prepared.*

All that can be done is to submit a concise report showing the general results of the year's fishing. Full reports, with statistics, will be subsequently published in Appendix No. 5. Meanwhile, the following summary is submitted:—

ONTARIO.

Very little information has been received from the local fishery officers up to date, but from the reports on hand it is expected that the yield of fisheries in this province will be about the same as last year, especially on the Great Lakes. The number of persons engaged in the fisheries will not be larger than that of other years, the object of the department being to curtail fishing as much as possible in certain localities, in order to avoid possible injury by over-fishing.

NOVA SCOTIA.

In district No. 1, comprising the Island of Cape Breton, Inspector Bertram reports that although the fishery statistics of his division have not yet been fully collected, he is, however, in a position to state that the cod fishery will show an increase. During the past few years, in the first part of the season, codfish were scarce on the inshore fishing grounds, but towards the autumn they became much more abundant, and the best catches were made in October, November and December. A marked feature of this fishery is the influence of the heavy east and north-east storms in causing codfish to work inshore. After these storms, boat fishermen find the fish more abundant. This has been the experience for several years past. Complaints are sometimes heard to the effect that cod are kept on the outside banks in mid-summer by vessels throwing the offal of fish overboard. A remedy for this evil would be for fishermen to club together and build, or purchase, a class of vessels suitable for outside fishing, as has been done in other parts of Nova Scotia where the advantages for prosecuting this fishery are not so great as in Cape Breton. The Government has very wisely encouraged deep-sea fishing by increasing the bounty to fishing vessels, and there is no doubt but that cod fishing in vessels is far more profitable than in boats. The herring fishery, which is the most important to Cape Breton fishermen, unfortunately proved almost a total failure this year. A few barrels were taken in the early part of the season; but the mid-summer run, known as "Cape Breton July herring," did not strike inshore. No reasons are adduced, and as these fish are largely used for home consumption, the failure of this fishery will be severely felt through the whole of Cape Breton Island. Mackerel will show an average catch. The fact that a larger quantity of these fish are not caught is due to the fishermen rather than to a scarcity of the fish. No attempt is made to fish with hook and line. A limited number of gill-nets are set, and indifferently attended to. The only vessel engaged in the mackerel fishery in

* All the reports and statements of inspectors have been received since the above was written and appear as appendices to this report.

this district did exceptionally well, her owners and crew receiving good returns for their time and outlay. This is further evidence of the proper mode of carrying on the industry. The salmon fishery will show an increase, particularly in the county of Inverness, where fully one hundred and fifty per cent more salmon were taken during recent years than ten years ago. This is undoubtedly due to the fact that the spawning grounds are better protected than formerly. Several firms are engaged buying salmon from the fishermen and shipping them, packed in ice, to Canadian and United States' markets. The lobster fishery will show a large increase, these crustaceans having been more abundant than in the previous year, and of good quality. Storms were not so frequent, and the extension granted by the department proved a great boon, particularly to the fishermen of Gabarus and Fourchu who, without this, would have been in destitute circumstances owing to the failure of other branches of the fisheries. Up to 1892, smelt fishing in this district was in its infancy. During that year, no more than twelve bag-net licenses were issued, while in 1893 there were thirty, and the number will very likely be increased this season. The tidal waters of River Inhabitants, county of Richmond, is the principal place for this fishery. The catch is mostly shipped to the United States. Gaspereaux will show a decrease and trout an average catch.

The close seasons have been better observed, and less illegal fishing took place. The staff of fishery overseers and guardians is more efficient; and the rivers were well protected. Fishery courts were held in each of the four counties of Cape Breton Island; thirty-three cases were tried, twenty-eight convictions obtained, and five cases dismissed. Four convictions on view were made. The various divisions requiring special attention were frequently visited. The present system of collecting and paying fishing bounty claims gives general satisfaction. Under this system, there is very little chance for dishonest persons to practice fraud, and irregularities can easily be avoided.

In district No. 2, which comprises the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants, Inspector Hockin reports that he has reason to believe that the yield of the fisheries will be an average one, slightly in excess of that of last year. The salmon fishery on the Atlantic coast may show a decrease, but this will be more than made up by the increase in the Strait of Northumberland. The catch of alewives will be nearly the same as last year. Smelts will show an increase. Cod may yield an increase of from five to ten per cent. The catch of herring will be under that of last year, probably ten per cent. In the eastern portion of this district, mackerel will probably show a falling off of twenty per cent, but this may be partially made up by some large catches of fall mackerel on the western portion. The past season proved a prosperous one for the lobster fishery. The weather was favourable, and the traps could be regularly visited. The yield will probably exceed that of last year by ten per cent. Squid, which are exclusively used for bait, and as such have become a merchantable fish, were abundant.

In district No. 3, which comprises the counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's, Inspector Kinney reports very little improvement in the catch of cod, although prices ruled somewhat higher, which helped the fishermen to some extent. The trade in "Finnan Haddies" in Digby County has become an important business, requiring an almost unlimited supply of haddock, for which good prices are obtained. The herring fishery proved

an almost total failure; the catch of mackerel also shows a decline. Alewives will show an increase. The lobster industry is on the increase. This season's catch will be considerably in advance of that of 1892.

NEW BRUNSWICK.

In district No. 1, which comprises the county of Charlotte, including the islands of Campobello, Grand Manan, and Passamaquoddy Bay, Inspector Pratt reports that the yield of the fisheries will be equal to that of 1892. With few exceptions, the fishing grounds yielded good returns, and good markets were found for all the catch, at remunerative prices.

For some unknown reason, the schools of large herring did not come into the Bay of Fundy last winter, and little was done in that branch of the business until spring. The catch of lobsters was about the same as in 1892, with more men engaged in the fishery, and prices considerably higher than during any previous year. Cod will show a decrease. Hake and haddock will show an increase owing to the fact that the fish were more abundant and to the appearance of fewer dog-fish in the bay. The catch of pollock was about the same. Mackerel were scarce. Trout fishing was about the same as last year, affording ample enjoyment to the large number of sportsmen who yearly visit the lakes and rivers of this district.

In district No. 2, which comprises the counties of Restigouche, Gloucester, Northumberland, Kent and Westmoreland, Inspector Chapman reports that he feels quite sure the aggregate value of fish caught in his district will amount to upwards of \$2,750,000, and exceed the yield of 1892 by more than half a million dollars; being nearly double that of 1889, or about equal to the whole catch of New Brunswick for that year. This increase occurred in the coast and river fisheries, showing the advantages of an improved patrol system and better protection generally. The breeding pool, and spawning beds of rivers were full of salmon in the fall. Parr were more abundant than for twenty years past; in fact, they were so numerous that they were, in some cases, presumed to be alewives which had remained in the rivers.

Shad will be about the same as last year. There has been an enormous increase in the number of salmon caught, especially in the Miramichi River and along the coast of Gloucester. The whole catch for 1893, will be nearly double that of 1892.

A large quantity of herring was taken in the spring everywhere on the coast, for food and bait. At some points, these fish were so abundant that rows of spawn were washed ashore. Fall herring were also more abundant than in past years.

Upwards of three million more pounds of smelts were caught than in 1892. Notwithstanding the heavy and continuous storms in August and September, which caused a heavy loss of property and several lives, the yield of cod was larger than for several years past. Up to the 10th of August it was 50 per cent better than at the same time last year, and the fish continued to be abundant up to a late date in the fall; fishing would have continued successful had it not been for stormy weather.

Mackerel did not remain on the coast as long as during the years before. There was a smaller quantity taken, but of better quality. Owing to the removal of prohibition against bass fishing on the Miramichi, a large increase will be returned. The fish taken with hook and line were generally larger than those in 1892. Though there may be a falling off in some places in the catch of lobsters, the aggregate yield will be slightly in excess of that of last year. About the same quantity of oysters were taken as last year, notwithstanding the regulation which prohibits their being fished for through the ice.

-In district No. 3, which comprises the counties of Albert, St. John, King's, Queen's, Sunbury, York, Carleton and Victoria, the catch of fish will exceed that of 1892, by a considerable amount. This is principally due to a larger catch of sea-fish in the county of St. John, such as herring, cod, hake, haddock and halibut. Sardines were reported to be more plentiful than for many years past, and prices ruled higher than last year owing to scarcity in the lower part of the bay. The fishing season for shad was very short and few were taken.

QUEBEC.

On the coast of Labrador cod fishing was good, and so was the salmon fishery generally. Around Anticosti Island, cod fishing was much better than last year; herring fishing middling, and lobster fishing poor. At Magdalen Islands, the cod fishery was fair; mackerel fishery very good; herring and lobster fisheries good. From Ste. Anne des Monts to Gaspé, the cod fishery was better than last year; the herring fishery abundant, and the salmon fishery middling. In the Bay des Chaleurs, the cod fishery was good, although the fishermen lost a great deal of time, owing to stormy weather. The herring fishery was middling, the lobster fishery, as well as the salmon fishery, good. Mackerel fishing failed entirely.

PRINCE EDWARD ISLAND.

Although full returns of the yield of the fisheries are seldom complete before the end of the calendar year, sufficient information has been received to enable the inspector for the above named province to estimate pretty accurately the general result of the season's operations. The catch of cod was small, fish having been scarce during the whole season, and the weather stormy. Mackerel will also show a great falling off. Some very good catches were made during the first part of the season, but the stormy weather broke the schools and very little fishing was done after the 20th August. There will be a decline of about 35 per cent in this fishery. Hake, haddock and halibut will also show a decrease. Spring herring were taken in great abundance at almost all fishing stations. Schools of large, fat herring strike inshore during the summer and fall months, but fishermen being then in pursuit of mackerel, pay little attention to them. The catch of herring, this year, was a good one; being fully equal to, if not above, the average.

Lobster fishing and canning were actively pursued during the season. There were 217 factories in operation, with an average of about 214,000 traps. Notwithstanding this large increase in plant, the catch was only slightly in excess of that of 1892. The lobsters were generally of a small size; but some large ones were caught, especially where the fishery was carried on in deep water.

The smelt fishery was above the average ; but, generally speaking, the season's operations were not satisfactory, as the yield of the staple branches of fishing industry fell considerably below that of an ordinary year.

BRITISH COLUMBIA.

The catch of salmon in the northern rivers was below the average. Compared with the pack of last season, there is a decrease of 700,000 lbs., and it is 137,000 lbs. less than the pack of 1891. The total yield for the province, exclusive of local consumption, is 29,169,908 lbs. Of this immense aggregate, the Fraser River has to be credited with 22,763,350 lbs.

During the season, there were 1,625 licenses issued for drift-net fishing ; being 350 more than in 1892. Of this number, 533 were for the northern rivers and the coast, and 1,072 for the Fraser River.

The experiment in curing white salmon, mentioned in last year's report as being tried at Port Essington by Mr. Bergman, did not prove a success ; the local demand for these fish has, however, been larger than formerly, and a large number have been salted.

The export of halibut, or other kinds of sea-fish has not increased to any extent since last year. The coasts of this province are teeming with food fishes of the finest quality, but the capital and knowledge required have not yet been jointly applied in the development of what will, in the near future, prove to be a source of wealth to thousands. In the meantime, a company in New Westminster is engaged shipping halibut to eastern markets by the car load ; but, owing to lack of capital, with an insufficient outfit.

The quantity of dog-fish oil manufactured this season will show a considerable increase over that of any previous year.

On several occasions, when necessary, Howe Sound, Burrard Inlet, Boundary and Mud Bays, the Nicomekel, Serpentine, Campbell and Sumas Rivers, and a salmon river near Pender Harbour, were visited. From the latter, and from Campbell River, obstructions to the passage of fish were removed.

The creeks which empty into Harrison Lake were explored, for the purpose of ascertaining their suitability as hatchery sites.

On the Nicola River, dams which had been built by Indians across the stream, and which completely prevented salmon from reaching their breeding places, were demolished.

During the months of March and April, 5,764,000 fine, strong young salmon were distributed from the Government hatchery, and in September and October, 6,860,000 ova were laid in.

MANITOBA.

Mr. R. Latouche Tupper, who was appointed Inspector of Fisheries on the 21st September, 1893, reports that the year has been a successful one for the fishermen. The fishing tugs and boats left Selkirk on the 6th June, and the season's commercial fishing was over by the 8th October ; the companies stopping long before the close season began as they had sufficient fish to supply the market at a remunerative price. There were no disasters, or loss of life or boats on Lake Winnipeg. Storms on the fishing grounds were few, and consequently less fish were lost by inability to

lift the nets at the proper time. All the commercial fishing is done in the northern, or larger, portion of Lake Winnipeg; the southern part being exclusively reserved for domestic fishing. As the domestic fishermen only commence working late in the fall and continue fishing through the first part of the winter, running their nets under the ice, no reliable figures can yet be given; but it is expected that the catch will be an average one, and that while it may turn out to be less in Lake Winnipeg, it will show an increase in Lake Manitoba.

All the lakes of Manitoba are shallow, and although the surface area of the different lakes is large, the extent of fishing waters is small. The utmost care must, therefore, be exercised in order to preserve and keep a constant supply of fish food. The expediency and wisdom of enacting and enforcing judicious restrictions and close seasons for the protection of fish is daily becoming more and more appreciated. The object of the Government is to perfect such laws as will secure, for all times, a source of income for those who live around these waters. Lakes Winnipeg, Manitoba and Winnipegosis, unlike those of Superior, Huron and Erie, are under the exclusive control of Canada, and unlike the latter cannot be depleted by foreign poachers, while the full benefit of protection can be realized by the residents.

The subject of proper close seasons will require early attention at the hands of the department. The fishery laws and regulations were strictly observed by the commercial fishermen. Offal of fish were properly taken care of. No waste of fish occurred through trying to handle too many nets with too few men; such as has been complained of in the past.

NORTH-WEST TERRITORIES.

The fisheries in Long Lake are increasing, owing to a strict observance of the fishing regulations and close seasons. In southern Alberta, the upper portions of streams are filled with various kinds of trout, and the lower reaches of rivers with pike, pickerel and suckers. Northern Alberta affords magnificent trout fishing, although from want of railway communications, it is difficult to get at the grounds. The lakes of the Saskatchewan district received a much needed rest last fall; Indians and Half-breeds being only allowed to fish during the close season for their own immediate use.

REPORT ON THE CANADIAN FISHERY EXHIBITS AT THE WORLD'S FAIR, CHICAGO.

To the Honourable

Sir CHARLES HIBBERT TUPPER, K.C.M.G., Q.C., M.P.,
Minister of Marine and Fisheries.

OTTAWA, 24th October, 1893.

SIR,—In compliance with your directions, I proceeded to the World's Fair at Chicago, on the 16th ultimo, for the purpose of inspecting the Fishery exhibits of Canada as compared with similar exhibits of other countries, and to represent you at the Fishermen's Convention and read a paper on the Fisheries of Canada.

I herewith hand you a copy of the paper which I read at the Convention referred to, giving a condensed account of our Canadian Fisheries, their extent, commercial value, and the means taken to protect them, which I learn has been published among the proceedings of the Fishermen's Convention, in the *Fishing Gazette* of New York.

With reference to our exhibits, I found a crowd of people always present when I visited our court in the Fisheries building, and judging by their remarks, which I heard, I am of opinion that they were very much appreciated and admired by the masses of the people who were constantly circulating amongst them, and examining them with the greatest interest.

Taking our exhibit as a whole, of stuffed fish, including the whale, sturgeon, seals, sharks, preserved, canned, commercial, pickled and dry fish, fish oil and fish-eating birds, models of boats and trap-nets, I am of opinion that the exhibits of no other country or state in the Fishery building could compare with them.

I saw in some of the courts of other places some fine specimens of fish which did not represent real fish like the Canadian specimens, but were made of composition material such as gelatine or plaster of Paris, and beautifully painted and coloured so as to represent the real fish with a life like appearance. I do not consider that such imitation specimens of fish, although admirably got up, could at all compare with our beautiful specimens of real fish.

An object of great interest, however, to the masses of the people was the fresh and salt water live fish exhibited by the United Fish Commission and Pennsylvania Fish Commission. The crowds of people that were constantly inspecting these most interesting specimens of fish life, rendered it most difficult to get sufficiently near the glass cases to obtain a close view of the numerous specimens of fish swimming about in their native element, and salt water from the coast was constantly supplied for the salt water fish. The establishment and maintenance of these aquaria must have been very expensive, but it was well worth the cost, as I saw nothing at the fair which seemed to possess more attraction for the people than this beautiful collection of live fish.

If sufficient funds could have been available for Canada to have had a hatchery for salmon or other fish, such as we had in London, and a hatchery for lobsters, it would have proved an immense attraction, but it would have been very expensive. A lobster hatchery would have been a great novelty, as but very few of the millions of people who have visited the Fair have ever had an opportunity of seeing such an establishment. A constant supply of salt water would have been the difficulty.

I understand a small fish hatchery was in operation during a short time in the summer, exhibited by the Pennsylvania Fish Commission, but when I saw it the eggs representing the ova of the fish were glass eggs; the hatching apparatus, however, gave a very good idea of the *modus operandi* of hatching young fish.

I herewith attach a sketch of the Fishery Building, with its two annexes, showing the space occupied by the Canadian Fishery exhibit both on the floor and gallery. The space allotted to our Court was 6,000 feet on the ground floor and 2,000 feet in the gallery.

The trophy erected by our department illustrative of our fisheries, both sporting and commercial, was much admired, and did great credit to Mr. Cox, our Assistant Engineer and Architect, who had the entire responsibility of designing a suitable plan of a trophy and superintending its erection in the building.

It is much to be regretted, however, that the authorities who had the locating and arranging of the spaces in the fishery building, allotted the space for this beautiful trophy where it now is, in rather an obscure position, instead of allowing it to be placed in the centre of the building, where it would have been in a prominent position and seen by every one, immediately on entering the building from any of its approaches, east or west, north or south. The place which it should have occupied in the centre of the building was allotted as a concession, on which is erected a circular stand for the sale of lemonade, soda water and other refreshments.

The exhibits in the Canadian Court of the fishery building are all in excellent order and appear to great advantage, and no finer specimens of salmon can be found anywhere than in this collection. The specimens are real and we have no imitation ones made of gelatine or other materials.

I regret to notice that the freezer which was furnished by Messrs. Withrow and Hillock, of Toronto, was of no use for our exhibit as our officers could not get the temperature low enough to freeze any fish, and I understand the lowest point they could get the temperature down to was 32° or perhaps 30°, and consequently fish could not be reduced to a frozen state in it. This proved a great drawback to our exhibit, as it would have been very interesting to have exhibited some of our large fresh fish in the freezer, if we could have got the temperature low enough, such as we had at the London Exhibition, where fresh fish were kept in good condition for six months. If the cold storage building had not been burned, fresh fish could have been frozen there and exhibited in our freezer for some time in a frozen state.

The Canadian collection of exhibits contain about fifty-seven specimens of different kinds of fish for food; six specimens of fish eating animals; three specimens of different kinds of seals; over three hundred specimens of stuffed fish; nine cases of fish eating birds; three fishing pound-nets; two models of fishing stations and fish netting; one patent Hockin fish-way; one Atlantic fishing boat; one Lunenburg whale boat; one large sized revolving light from Chanteloup's establishment, in Montreal, which was very much admired; one dug-out red cedar canoe, from British Columbia; nine models of boats; four boxes dry codfish; one box of dry hake, three boxes of dry codfish, first class; one half barrel of dry codfish; one half barrel tongues and sounds; one half barrel salted trout; six half barrels of mackerel; one barrel mackerel; one barrel of eels; five barrels herring; one barrel shad; one barrel salmon; a large number of boxes of canned salmon;

canned lobsters, canned clams, canned sardines; some samples of cod liver oil, salmon oil, seal oil, rat-fish oil, dog-fish oil, and oulachon oil; about eighty fine specimens of fish in alcohol, exhibited in three large cases; Munn's collection of fine boneless codfish, put up in tin boxes; canned salmon; canned tongues; canned capelin smoked, in oil; glue; cod liver oil; refined seal oil used for making butterine. Many of our specimens of fish were tastefully arranged round the Canadian trophy. All the specimens were first class. Amongst our specimens of fish animals is a splendid white whale, a large horse mackerel, two large sturgeons and three sharks.

NORWAY.

Sixty-five specimens of plaster cast fish, which looked very good and natural; a good collection of fish oil; some samples of dry codfish, not very good; a number of samples of dry stock fish; a number of samples of pickled fish, none of the samples of fish appear to be as good as Canadian fish; ten models of fishing boats, very good; two polar bears and some skins; a number of specimens of canned fish; seven boats, not quite equal to ours; a collection of nets and traps. I do not think as a whole it could be compared to the Canadian collection.

RUSSIA.

A collection of canned fish; nine models of boats, and some barrels of pickled herring; nets, oils and fish leather. It could not at all be compared to our collection.

NEW SOUTH WALES.

Canned fish; shells; a few fish in alcohol; some fish oil; two cases of fish eating birds; two boats; four seals; some pictures of fish in water colours; one case lizards in alcohol. This was a very good collection.

FRANCE.

A very large collection of canned sardines of very superior quality, but nothing else.

GREAT BRITAIN.

A fine collection of hooks, lines, flies and outfitting materials for sportsmen, and some pickled fish.

GERMANY.

A fine show of nets and hooks, and some models of boats.

MEXICO.

One large fine seal, stuffed; one large fine sea turtle; a number of specimens of fish in alcohol; fine specimens of dried shrimps; a few specimens of dried fish; mother of pearl, shells, sponges, nets, flowers made of shells and fish scales. A small exhibit, but very fine.

HOLLAND.

A fine large model of a Dutch fishing schooner taking in herring, with buoys and nets, giving a very good idea of their herring fishing.

JAPAN.

Samples of salted dried salmon; canned lobsters, salmon, prawns, mackerel, sardines and smoked herring; some fine samples of fish oil; kegs of pickled fish; dried salt fish; isinglass; fish hooks; oyster sauce; oyster pearls; fine specimens of fish in alcohol; crabs and lobsters, dried; four models of fishing boats, forming altogether a very good collection, with also some fine photographs of fish.

UNITED STATES FISH COMMISSION.

Twenty-two speckled trout made of gelatine composition, very good imitations of fish. A case of fish in alcohol. Two cases containing twenty-nine specimens of real stuffed fish. This was a very good collection. One hundred and fifty-nine specimens of fish made of gelatine and plaster, very good imitations. Seven fine specimens of seals; one large incubator; and several models and a fish-way.

STATE OF CALIFORNIA.

Thirty-nine specimens of fish made of gelatine and beautifully coloured.

STATE OF MAINE.

Twenty-nine specimens of fish of gelatine, very well done; six models of fishing schooners; six small pictures in oils, paintings of fishing scenes; and a few nets.

STATE OF WASHINGTON.

Thirty-nine specimens of real stuffed fish; three specimens of fish made of gelatine; thirty jars of specimens in alcohol; boxes of canned salmon; skeleton of a very large Pacific humpback whale, $47\frac{1}{2}$ feet long, and 48 feet girth, which was stranded on the 9th July, 1892, on Long Island Beach, state of Washington. A dug-out canoe; canned salmon in steaks; a very fine specimen of a fur seal; eleven fish-eating birds; one otter. This is a very fine collection.

STATE OF NORTH CAROLINA.

A fishermen's camp used for fishermen camping out on the beach. Samples of oyster rakes; samples of shad fish which come in early in February and continue on through March, April and May. 2,500 yards of nets sometimes take 3,700 shad; one man caught last season 95,000 shad, mostly sent to New York. Seven specimens of living diamond-back turtles, worth \$50 a dozen, which grow in large numbers in that state. A fine collection of oyster shells and clams. A large oyster business is done in this state. Seventy specimens of fine shad and other fish. Three models of boats. Also a fine collection of fish-eating birds. The collection of North Carolina is very fine.

STATE OF MINNESOTA.

One hundred and one specimens of stuffed fish, very good; eleven cases of birds, mostly fish eating and water birds. A model birch bark canoe with Indian and squaw. This is a small collection, but very good.

EXHIBIT OF E. K. BURNHAM.

Mackerel in kits, barrels and canned; packages very good finish.

CITY OF GLOUCESTER.

A beautiful large model of Gloucester Bay, with 12 schooners and boats; also samples of fishing gear, nets, lines and hooks; very good.

STATE OF RHODE ISLAND.

A large case showing fish going into pound-nets; lobster traps and a large fishing boat; also other fishing traps and fishing gear; two large Manhattan fishing boats and gear; a small fishing boat; a pleasure boat; samples of fish in alcohol; a fish steamer for taking Manhattan; a purse seine model. Pictures showing fishing scenes about Manhattan oil and guano factories. The Rhode Island exhibit was very fine.

SAN DIEGO.

Specimens of fish in alcohol; seven specimens of stuffed fish; some water birds; some cases of fine pearl and other shells.

STATE OF OREGON.

A fine specimen of a fur Alaska seal; seven specimens of fine stuffed fish; some fine specimens of stuffed salmon and trout; two cases of mounted birds; fourteen specimens of fish in alcohol; one whale boat and model of salmon fishing boat; some boxes of canned salmon. This is a very fine exhibit although not large.

STATE OF OHIO.

One hundred and thirty-two specimens of fish, some real and some made of gelatine composition.

BRAZIL.

A large alligator, and some large fish from Pera; one stuffed tarpon, and some small stuffed fish.

Mr. Tobin exhibits a fish sealing machine and other machines. Mr. Tobin, through Messrs. Mann Brothers, Chicago, exhibits a fine collection of oyster pails and oyster tongs.

The American Net and Twine Company of Boston and New York, exhibit a fine collection of nets, cordage and twine.

The Board of Trade, New Bedford, Mass., exhibit a fine collection of whalebone, walrus tusks, fish oil, and a model; also whaling instruments and harpoons.

Messrs John R. Neill & Company, of Boston, exhibit a fine collection of models of fish houses for smoking finnan haddies; models of a fishing schooner; a large sword-fish; lobster traps and fish nets; also pictures of fishing schooners and of the whole lobster business.

J. A. Miederdistkeks, of New York, exhibits a collection of Russian caviare and sea trout.

Mr. Maxham, of New York, exhibits eight large stuffed sturgeon and a fishing boat; also stuffed specimens of small fish in oil; smoked carp in cases.

J. G. Megler & Company, exhibit canned Columbia River salmon, all in different shapes; specimens of fish glue.

Messrs. Wolf & Reessing, showed specimens of canned sardines.

Messrs. Burrill & Morrill, of Portland, Maine, had a good collection of canned fish.

Mr. Booth, of Chicago, exhibited canned goods, oysters, clams and salmon; whole fish canned; and a large lobster; a seal and some shells. This was a very good private exhibit.

WEST ANNEX OF THE FISHERIES BUILDING.

State of Wisconsin.—Exhibits some fine specimens of live fish in fresh water. An aquarium of 25 tanks, containing black bass, trout, gar pike and common trout.

Roger's Fish-way in operation with running water.

Pennsylvania Fish Commission.—Exhibits in twelve tanks containing bass and trout in fresh water.

Forest and Stream Newspaper.—Exhibits a large tarpon fish, stuffed, weighing 205 pounds. Five specimens of stuffed fish, and pictures. A canoe weighing ten pounds. Three cases of birds and head of buffalo, moose, mountain goat, mountain sheep, red deer, caribou and elk.

Natchang Silk Company.—Private exhibit, showing the making by steam engine of silk fishing lines.

Wm. C. Harris.—Fifty-five oil paintings and a tarpon.

Osgoode Portable Boat Company of Michigan.—Four samples india-rubber folding boats.

The Acme Folding Boat Company.—Shows ten models of boats.

There was also a large collection of boats, canoes, skiffs, tents, and camp furniture in this building, exhibited by different parties.

Mr. Johnson exhibits a collection of trout and bass flies, hooks and fishing reels and rods.

Mr. Benson exhibits samples of fishing rods.

Mr. Spalding makes a similar exhibit.

EAST ANNEX TO THE FISHERIES BUILDING.

United States Fish Commission of Washington exhibited an aquarium for salt water fish, supplied with salt water from the sea. Twelve tanks of sea bass, sand sharks, sucking fish, file fish, salt water turtles, &c. The tanks in this aquarium were beautifully got up, with water running from fountains into the tanks. The specimens of fish were very fine.

There was also a very fine collection of fresh water fish, supplied with water from Lake Michigan. In it were specimens of black bass, white bass, mud fish, cat-fish, eels, brook trout, sunfish, carp, gold fish, perch and suckers. There were thirty-three tanks containing fresh water fish in this aquarium. It was a splendid exhibition, and must have been very expensive to provide the tanks and maintain them.

I think that Canada's exhibits as a whole, were better than the exhibits of any other country or individual state exhibit, but if all the United States exhibits were taken together, including the aquaria, I consider they were more numerous, and in some respects superior, to the Canadian exhibit.

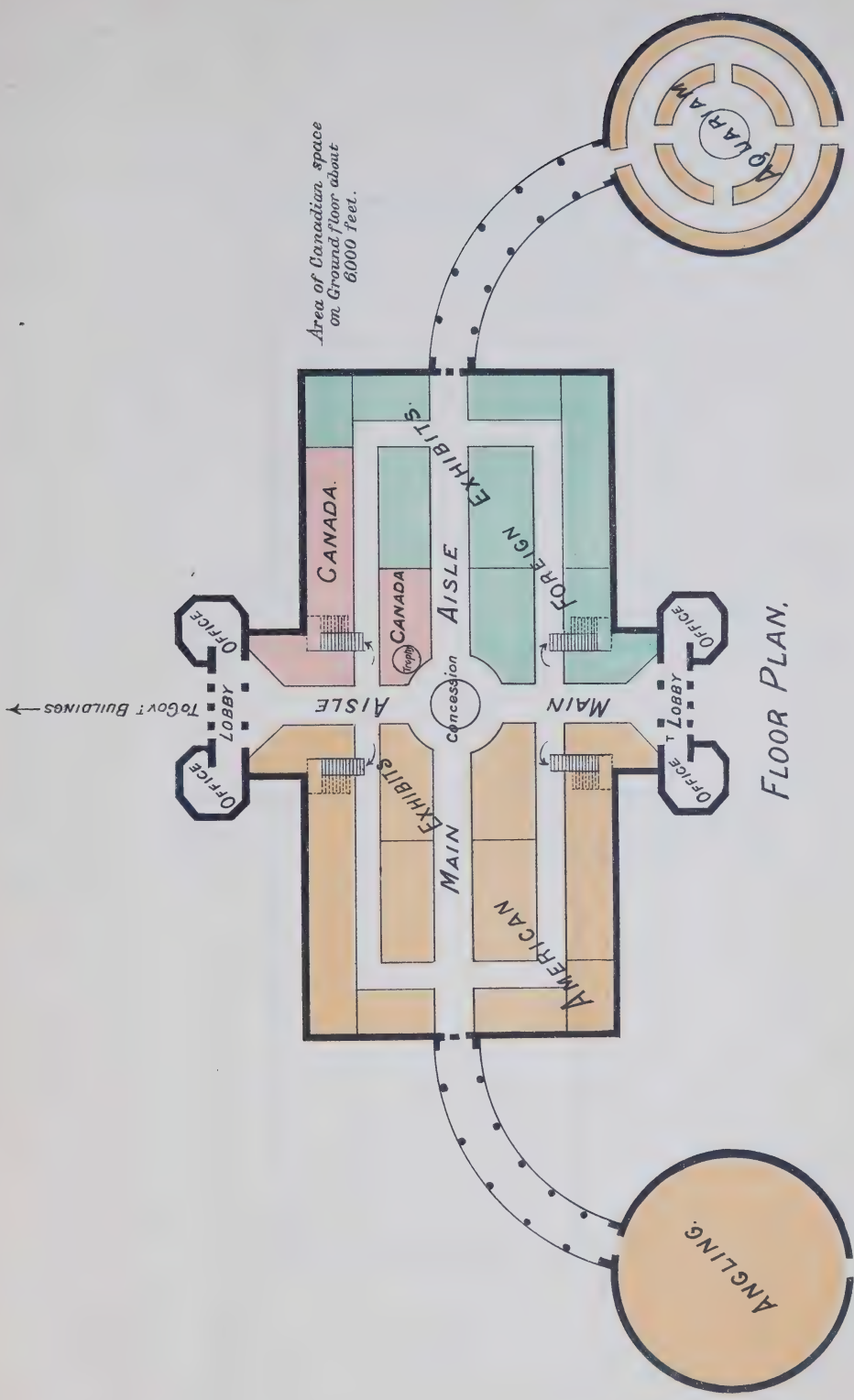
I think that in the Fisheries Building the aquaria was the most interesting exhibit, and was the greatest attraction to the masses of the people passing through the building, but a reference to the awards made by the Judges of the exhibits in this building will show that Canada's exhibits took a very high place indeed in the general collection of exhibits.

I have, sir, the honour to be

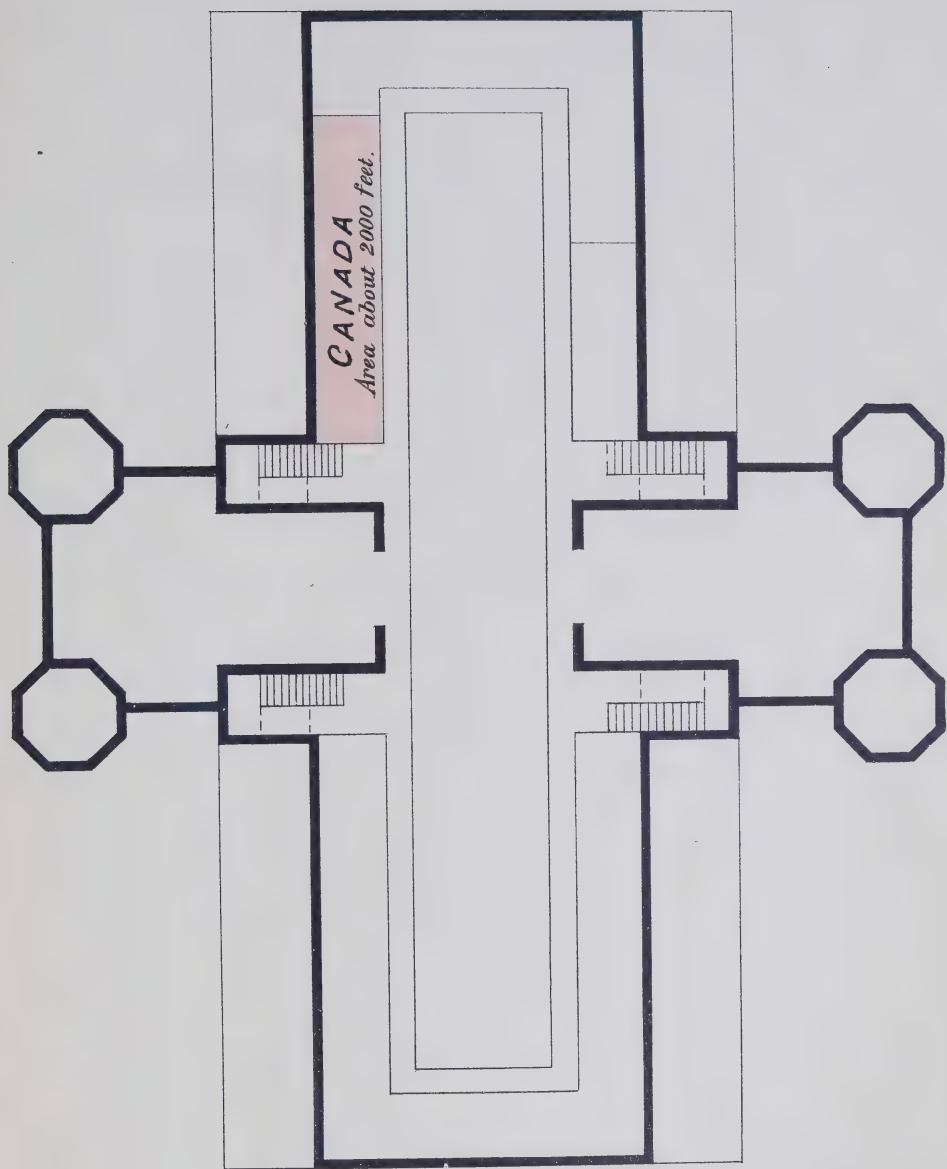
Your obedient servant,

WM. SMITH,

Deputy Minister of Marine and Fisheries.



FLOOR PLAN.



GALLERY PLAN.

PAPER ON THE FISHERIES OF CANADA, READ ON THE 19TH SEPTEMBER, 1893, BEFORE THE FISHERMEN'S CONVENTION, AT THE WORLD'S FAIR, BY MR. WILLIAM SMITH, DEPUTY MINISTER OF MARINE AND FISHERIES OF CANADA.

On a recent occasion a communication was received by the Honourable the Minister of Marine and Fisheries of Canada, from Captain Collins, Chief of the Department of Fish and Fisheries at the Columbian Exhibition, extending to him an invitation to be present at the exercises to be held on Fishermen's Days, and also inviting him to address this meeting or read a paper before it, on any subject relating to fish or the fishing industries of Canada. He replied to that communication, informing Captain Collins that he regretted he was prevented by pressure of departmental work, and other public business, from complying with his request (having only recently returned from Paris where he had been engaged as Her Majesty's Agent, before the Behring Sea Tribunal of Arbitration), and that he desired me, as his deputy, to attend the meeting for him. I have now much pleasure in meeting you on this occasion, and at the same time, I avail myself of this opportunity, of conveying the thanks of my chief, the Honourable Sir Charles Hibbert Tupper, for the honour which has been shown him, in inviting him to this Convention. I am sure it would have given him much pleasure, if he could have arranged to attend it.

In his absence, therefore, I propose to address to you a few remarks, in connection with the subject of the Fisheries of Canada.

It has often been asserted that the fisheries were of great importance to almost all nations, especially to those whose territories are either entirely insular, or partially surrounded by the sea. In this respect, the fisheries of Canada are certainly among the most valuable of the whole world. As a national possession, and as a nursery for sailors, they are inestimable; and as a field for industry and enterprise, they may be said to be almost inexhaustible. Extending from the Bay of Fundy, and the Straits of Belle Isle, on the Atlantic Ocean, to the boundary of Alaska, on the Pacific Ocean, the sea and inland fisheries of the Dominion, which are the property of the citizens of Canada, are well known to be of great value. They are also in other respects of considerable importance to such of our people as are engaged in maritime pursuits, or, as is sometimes the case, combined with that of agriculture.

The principal localities in Canada in which fishing is carried on, do not usually present conditions favourable to the successful cultivation of the soil, being limited in extent and fertility, and subject to certain disadvantages as regards the climate. The prolific nature of the adjacent waters, and the convenience of their undisturbed use, are a necessary compensation for defects of soil and climate.

The sea coast line, extending over the fishing area, covers a distance of about 5,000 miles, from the Bay of Fundy to the Strait of Belle Isle, and over 7,000 miles on the coasts of British Columbia.

While the salt water inshore area, not including minor indentations, covers more than 15,000 square miles, abounding with fish life, the fact should not be lost sight of, that the fresh water area of that part of the great lakes belonging to Canada is computed at 72,700 square miles. This is not surprising, when the whole area of this wonderful chain of lakes, extending over 1,000 miles, is said to contain more than one-half the fresh water of the globe. Manitoba and the North-west Territories also contain large sheets of water, well stocked with the most excellent kinds of food fish.

The commercial value of the fisheries of Canada reached nearly \$19,000,000 for the year 1892, and was subdivided as follows, in the different provinces forming the Dominion:—

Nova Scotia.....	\$ 6,340,724
New Brunswick.....	3,203,922
British Columbia.....	2,849,493
Quebec.....	2,236,732
Ontario.....	2,042,198
Prince Edward Island...	1,179,856
Manitoba and the North-west Territories.....	1,088,254

This does not include the value, probably amounting to \$2,000,000, of a large quantity of salmon and other fish consumed by the Indians and Half-breeds of British Columbia, Manitoba and the North-west Territories.

These figures are not by any means exaggerated, but are rather below than above the real value.

This arises from the fact that the fishermen are sometimes unwilling to give correct returns of their catch, under the erroneous impression that this might lead to increased taxation, and persons well informed on the subject have frequently asserted that the value of fish caught in Canadian waters is much in excess of the value as published in our blue books.

The varieties of fish which aggregate the largest values are cod, which yielded in 1892, a value of \$4,063,458; the salmon, \$2,243,000; the herring, \$2,035,630; the lobster, \$2,000,000; and the mackerel, \$1,347,000.

The most important deep-sea fishing grounds on the Atlantic are off the coasts of Nova Scotia, New Brunswick and Prince Edward Island; around the Magdalen Islands, the Baie des Chaleurs, the Island of Anticosti, and the coast of Labrador. In the Pacific Ocean, the fishing grounds are off the shores of British Columbia, although salmon is taken in large quantities in the Fraser River, and in the waters near its entrance. The waters on all our coasts team with the most valuable kinds of commercial fish, affording ample employment to a large number of vessels and men engaged in this industry.

Between the years 1869 and 1892, the principal commercial fisheries yielded as follows:—

Cod.....	\$ 90,930,224
Herring.....	44,258,161
Lobsters.....	39,693,811
Mackerel.....	34,120,501
Salmon.....	30,887,191
Haddock.....	11,299,513

The cod fishery is carried on in schooners of from 60 to 100 tons, with trawls or bultows, and trap-nets, within easy reach of the coasts of Nova Scotia and Labrador, or in boats, with hand lines, in shoaler water near land, where shelter is of easy access.

The Canadian cod is exported to Europe, South America and the West Indies, where it usually brings good prices, owing to its superior quality and the care taken in its preparation. Notwithstanding the enormous quantities of these fish caught every year, the supply shows but little sign of exhaustion, so far as Canada is concerned. Occasional fluctuations may occur, but these are due to storms or local circumstances, and not to a scarcity of fish.

Mackerel and herring are found in most Canadian waters. The former are abundant around the shores of Prince Edward and Cape Breton Islands, the Bay of Fundy, the Gulf of St. Lawrence, the Gut of Canso and around the Magdalen Islands. They make there first appearance about the beginning of July, and remain till the end of October. Our best market for mackerel is the United States, although some of these fish are sometimes shipped to England and the West Indies.

Fishing for herring begins in the spring, and continues while the weather permits, until late in the fall. This fishery ranks next in importance to the cod fishery. The finest kind of herring are caught off the shores of the Island of Cape Breton and Labrador.

While the lobster fishery may be said to be much exhausted on the coasts of the New England States, the progress of this industry in Canada has been almost phenomenal.

In 1869, it only yielded \$15,275, while four years later it had reached \$1,000,000. In 1874, the figures had increased to \$2,000,000; while in 1881, the value of this fishery reached the highest point on record, nearly \$3,000,000. The returns for 1892, show that there are 626 canneries in operation, using 768,469 traps and other plant, valued at \$1,000,000. The quantity of canned lobsters amounted to 12,524,498 pounds, besides 6,012 tons disposed of fresh, or shipped alive to the United States, representing a catch during one single season of about 80,000,000 lobsters, valued at \$2,000,000. Some experiments have been made to ship lobsters alive to England, but considerable loss took place on the voyage across.

Although large numbers of salmon are annually taken on the Atlantic coast, this is nothing when compared to the phenomenal yield of this fish at the Fraser River and other rivers in British Columbia. The canning industry of that province has so quickly and so largely developed, that it is now one of its most important resources, and furnishes a most valuable article of export. For the past three years the pack of salmon in British Columbia has averaged 15,000,000 pound cans; while this year it is calculated that it will amount to 20,500,000 pounds. The weight of this enormous pack will aggregate over 10,000 tons. It may be mentioned that besides this large yield of salmon, large quantities of sturgeon, black cod, flounders, halibut, oulachons, and other valuable fish are also caught.

The far-famed Canadian oyster is so well and so favourably known as to make it almost unnecessary to mention it here. These delicious bivalves are found in great abundance all over New Brunswick and Prince Edward Island waters, and on some parts of the Nova Scotia coast. A professional oyster expert was recently imported from England, and is now doing good service, re-stocking the exhausted oyster beds.

Our inland lakes and rivers team with whitefish, salmon, trout, pickerel, bass, speckled trout, sturgeon and maskinongé. The most valuable of our inland fish is the whitefish, the yield of which amounted to 23,776,000 pounds in 1892, valued at \$1,500,000. Sturgeon, salmon-trout, pickerel and bass also form a valuable adjunct to the wealth of these inland waters.

The total number of men engaged in the fishing industry of Canada during 1892, was 63,678, using nets and other fishing gear, representing a capital of over \$7,500,000. About 1,000 schooners and steam vessels measuring 37,200 tons, valued at over \$2,000,000, manned by 8,330 sailors, were employed in this industry. 55,348 shore fishermen also fished, with 30,500 boats, valued at over \$1,000,000, with 4,500,000 fathoms of nets, worth \$1,475,000, besides other fishing gear, such as seines, pound-nets, traps, weirs, &c.

In order to ensure the permanency of the valuable industry which I have attempted to describe, the Canadian Government enforces efficient measures of protection. These consist of judicious laws and regulations, strictly carried out by a large staff of fishery officers, stationed at every place where fishing is carried on, by a force of armed cruisers employed on the Atlantic coast, and on the great lakes of Ontario; by the establishment of close seasons, intended to protect the fish at the most critical and important period of their existence, namely, during the spawning season; by a judicious system of leases and licenses through which the Government is enabled to regulate fishing in accordance with the requirements of each locality, or to check its undue expansion, when it is deemed necessary for the protection of the fish. With such power and authority available, there is very little danger of the supply being exhausted by over-fishing or by a prevalence of injurious practices.

As an adjunct to natural reproduction, the Canadian Government has, since 1859, called to its assistance artificial fish breeding. From very modest beginnings,

this science has reached very large proportions in Canada, where there are now fourteen fish hatcheries, disseminated all over the country, including one in British Columbia and one in Manitoba; one in Nova Scotia is for the exclusive hatching of lobsters. From these establishments, 136,000,000 fry, consisting of salmon, white-fish, salmon-trout and lobsters were planted in the several waters of the Dominion during the year 1892.

With the view of encouraging the development of the sea fisheries and the building of improved fishing craft, the Government of Canada annually distribute a sum of about \$160,000 among the fishermen of the Maritime Provinces. This bounty is paid on the basis of \$1.50 per ton to vessels, and \$3 per man to boat fishermen, with an additional dollar to the owner of the boat. The amount thus distributed during the past ten years exceeds \$1,500,000.

Our Government recently offered two prizes to be awarded for the best models of fishing vessels, with the view of encouraging a superior and safe class of deep-sea fishing schooners, and a number of handsome models have been received. Competent judges have been selected and the awards will soon be made public. By this means it is hoped that our fishing vessels will in future be built of the best models as regards speed, safety and carrying capacity.

Fisheries Intelligence Bureaux were inaugurated in Canada in 1889, and are becoming more and more popular. The usefulness of a system through which the movements of bait and fish can be daily ascertained and reported at the principal fishing stations is being each year more highly valued; and demands are constantly made for new reporting stations. There were fifty-five of these last year, dispersed along the coasts of the Maritime Provinces, from Campobello, in the Bay of Fundy, to the Magdalen Islands, in the Gulf of St. Lawrence.

One of the principal drawbacks experienced in Canada in the enforcement of the fishery laws and regulations, especially on the Great Lakes and other international waters, is the fact that our fishermen are sometimes placed at a disadvantage as compared with those of the neighbouring Republic. The operation of these necessary regulations naturally appears somewhat unfair to our people when their less hampered neighbours in United States waters, almost within their sight, are permitted to take fish at all times, and by means of all kinds of fishing apparatus, without let or hindrance, within the same geographical district.

The Canadian Government has been sometimes accused of protecting the fish for the benefit of our neighbours in the United States, and by a strict enforcement of the Canadian regulations, depriving Canadians of corresponding advantages.

In order to obviate, as much as possible, such a state of affairs, a Joint Commission, composed of Mr. Rathbun, a Member of the United States Fish Commission at Washington, which Commission has rendered good service to the fishery interests of the United States; and Dr. Wakeham, a Fishery Officer of experience, and Acting Commander of the Fishery Protection Service of Canada; was recently appointed to inquire into, and report upon, the modes of preventing injurious or destructive methods of fishing in the territorial waters of the United States and those of Canada, respectively, as well as in waters outside the territorial limits of either country; the prevention of the polluting or obstructing of such contiguous waters to the detriment of the fisheries, or of navigation; the adoption of close seasons to protect the fish during their breeding period; the encouragement of artificial fish culture, etc., etc. Dr. Wakeham was appointed by Royal Commission, signed by Her Majesty the Queen, and Mr. Rathbun by the President of the United States.

Another Commission, composed of Messrs. Samuel Wilmot, Superintendent of Fish Culture of Canada, an officer of great experience in fishery matters, and Mr. Edward Harris, also an experienced fisherman, of Ontario, is engaged in making researches on similar subjects, in Canadian waters. No doubt the result of the labours of both the foregoing mentioned Commissions, when published, will do much to dispel erroneous impressions heretofore prevailing, regarding the protection of fish in each country, and lead to joint action, which cannot fail to be most beneficial to the fishing interests of both countries, as well as to the fishermen engaged in this industry.

As you are aware, the fisheries of the United States are under the control of the respective States bordering on the lakes and rivers common to both countries, while those of Canada are managed by the central or Federal Government at Ottawa, with the exception of the inland waters of New Brunswick, Quebec and Ontario, over which the Provincial Governments claim certain jurisdiction.

For the purpose of protecting the sea coast and inland fisheries of Canada, the Government employs about 400 officers, besides about 200 temporary guardians engaged at certain periods of the year to assist the regular officers, especially when fish are spawning. This service requires an annual expenditure of about \$150,000, including the amount expended on fish breeding.

Six steamers and two fast sailing schooners are also employed in protecting the territorial waters of Canada. The expenditure on account of this service alone amounts to about \$100,000 a year.

The fur-seal industry of British Columbia has grown to large proportions during late years. There was in 1892, a fleet of 66 schooners engaged in this industry, aggregating 4,456 tons, carrying 280 boats, 250 canoes, valued at over half a million dollars, and manned by 952 white men and 491 Indians. The catch amounted to 46,362 skins, valued at over \$600,000.

The progress of this industry has been gradual, but steady. Prior to 1878, very few seals were killed by Canadian sealers. Hunting was not then carried on farther out than about 20 miles from shore, during the months of April, May and June, by the natives. The seals were cautiously approached in canoes, and killed with spears while asleep on the surface of the water. The use of fire arms was studiously avoided. What a difference we see now, with a fine fleet of schooners sailing from British Columbia, and its improved equipment.

The catch of fur seals by Canadians, which is given in 1876, at 2,600 skins, only reached 9,195 skins in 1883, while in 1891, the number killed amounted to 53,000, with a value of \$795,000. This will show the great value of this industry, and the necessity of adopting proper means to ensure its protection and permanency.

By virtue of a treaty between the United States and Great Britain, signed at Washington on the 29th February, 1892, it was decided to submit the disputes which had arisen in the past relative to jurisdiction of the above-named countries over Behring Sea, and the fur-seal fishery, to an arbitration Tribunal composed of seven Arbitrators; two of whom were to be named by the President of the United States; two by Great Britain; one by France; one by Italy; and one by Sweden and Norway.

The Tribunal met at Paris, on the 23rd February, 1893, adjourning until the 23rd March, and the award was given on the 15th August, 1893.

The Tribunal decided against the contentions of the United States as to Behring Sea being a *mare clausum*, or closed sea; also that the United States had no exclusive rights of protection and property in the fur seals frequenting the islands of the United States in Behring Sea, when such seals were found outside the ordinary three-mile limit.

They further enacted the following regulations for the future protection and preservation of the fur seals in Behring Sea:—

1. A zone of sixty miles around the Pribyloff Islands, in which it is forbidden to kill any seals.
2. A general close season from 1st May to 31st July, during which it is forbidden to kill any seals;
3. Only sailing vessels, with fishing boats or canoes, to be allowed to kill seals during the open season;
4. Each fishing vessel licensed to engage in seal fishing to carry a distinguishing flag, prescribed by its Government;
5. Dates and localities of fishing to be entered in a log-book, as well as the number and sex of seals killed each day;
6. The use of nets, firearms and explosives is forbidden. Shot guns only to be used outside Behring Sea, during the lawful season;

7. The two Governments to take measures to control the fitness of the men authorized to engage in fur seal fishing;

8. These regulations not to apply to resident Indians carrying on fur seal fishing in canoes or undecked boats, provided they are not in the employment of other persons. They may also be employed as hunters as heretofore;

9. These regulations to remain in force until abolished or modified by common agreement, and to be revised every five years.

Some objections have been made by some of our Canadian sealers to these regulations, but it is probable that after a little experience it will be found both by the United States and Canadian sealers that their interests will not be much injured, if at all, and that the seals will be better protected and preserved than formerly.

Although we have not obtained all that we desired in the way of regulations, as the question submitted under this head to the arbitrators was one full of very great difficulties, it is still possible that the United States by friendly agreement with Great Britain and other powers may improve the regulations which will still further preserve seal life and yet permit the pelagic sealers to carry on a profitable business.

Great Britain and Canada have much reason to be pleased with the settlement of the great question of right which is now complete, as on every point Great Britain's contention has been sustained, and that question has been settled for all time to come, and will add greatly to the prospects of peace between the two nations so closely connected by commerce and relationship.

By the settlement of this important question it is probable it will never be the cause of any dispute or ill-feeling between the United States on the one hand, and Great Britain and Canada on the other.

It might be advisable here to say something about Canada as a field for the angler. In this respect, it is without doubt a perfect paradise for sportsmen, barring, of course, the flies and mosquitoes. This fact is so well known that the principal salmon streams in New Brunswick and Quebec, such as the Restigouche, the Mirimichi, the Nepissiquit, the Cascapedia, the Saguenay, etc., have been leased by clubs or private gentlemen, some of them from the United States, and other places, who have built commodious and almost princely residences, in which they enjoy themselves during the fishing season, and the value of some of the salmon rivers has gone up to very high prices. A salmon river, the Cascapedia, was recently leased by the Quebec Local Government to which it belongs, for the sum of \$6,125 a year. I understand some New York gentlemen are the fortunate possessors of this valuable lease.

Besides salmon, there is also an abundant supply of bass, maskinongé and other fish for sportsmen who cannot afford to lease or own a salmon river.

Before concluding these remarks, I may say that the Fisheries Service of Canada is managed by the Department of Marine and Fisheries, over which the Minister of Marine and Fisheries for the time being presides, and such Minister is a member of the Government, with a seat in the Cabinet, and is also a member of the legislature. He has, however, many duties to perform, besides the administration of the fisheries, including all matters relating to pilots and pilotage: the construction and maintenance of all lighthouses, light-ships, and fog-alarms, and automatic buoys numbering 1,189 of all kinds, both large and small; harbour commissioners and harbour masters; the management of Government piers, wharfs and breakwaters; steamships and vessels belonging to the Government engaged in connection with services administered by the Marine and Fisheries Department; sick and distressed seamen, and the maintenance of marine hospitals; the life-boat service, and rewards for saving life; inquiries into the cause of shipwrecks; the inspection of steamboats and examination of engineers and inquiry into accidents to steamers and the conduct of engineers; the examination of masters and mates; registration and measurement of shipping; meteorological and magnetic services; tidal observations on the coasts of Canada; inspection of vessels carrying live stock from Canada to Europe; shipping of seamen, shipping masters, and shipping offices; winter communication between Prince Edward Island and the mainland by steamer and ice boats; hydrographic

surveys; removal of wrecks and other obstructions in navigable waters, and generally, all such matters as refer to the Marine and Fisheries interests of Canada. The department employs altogether 2,236 officers and employees.

It will be seen by this that the minister has much to engage his attention besides the administration of the Fisheries service.

I am much pleased to have had an opportunity of submitting to you this brief account of the Fisheries of Canada, and the manner in which the Government service in connection with it is administered.

An examination of the different kinds of fish taken from our waters and now on exhibition in the Fisheries building in this great World's Fair, will explain to some extent the reason why every Canadian citizen feels proud of this important branch of our commerce, and I hope it will be found that the specimens and exhibits of fish we have sent here will be very creditable to the Dominion of Canada, and compare favourably with those of older and more wealthy countries.

I may say that in the great Fisheries Exhibition of London, in 1883, the Department of Marine and Fisheries, and individuals of Canada, carried off 32 gold medals, 40 silver medals and 23 bronze medals, while in the Fisheries Exhibition in the World's Fair, in 1893, I understand the Marine and Fisheries Exhibit will obtain the highest awards, consisting of diplomas and gold medals, besides about a score of diplomas and medals to individual exhibitors.

Diplomas will be awarded for the general Canadian Fisheries Exhibit, consisting of stuffed fish, fish in alcohol, collection of fish eating birds and aquatic animals, models of boats and fish traps, commercial fish and fish oils. I am much pleased to hear also that an official of the Marine and Fisheries Department, Mr. Robert Hockin, of Pictou, N. S., who has given much attention to an improved fish-way, will obtain the highest award for his patent fish-way.

Canadian boat builders are still to the front, and builders of fishing boats, who received awards in 1883 and 1886 in London, will receive similar high awards at this exhibition.

I believe that it is well known that Canada has exhibited here and at other exhibitions, her food and commercial fishes in the packages in which they are found in the ordinary course of trade, while some other countries have exhibited their fish in fine polished wood packages, never found in the market.

Canada naturally feels gratified with the high position which her exhibits of commercial fishes have taken, both here and at the London Exhibition, and has much reason to feel satisfied with the fair and honourable treatment she has always received at the hands of the judges at the different exhibitions where her commercial and other fish have been placed in competition with those of other countries.

The following is a copy of the awards given by the Judges with reference to the Fishery Exhibits of Canada, in the Fisheries Building, at the World's Fair, Chicago, viz. :—

WORLD'S COLUMBIAN COMMISSION, AWARDS DEPARTMENT,

REPORT No. 60, CANADA, DEPARTMENT "D," FISHERIES,

August 21st, 1893.

To the President and Members of the Executive Committee on Awards, World's Columbian Exposition :—

GENTLEMEN,—We beg to advise you that the individual judges, Messrs. N. Borodine, N. O. Cram and W. L. May, assigned to the exhibits of Canada in Groups 37, 38 and 40 in classes 247, 249, 250, 257, 258, 262, 271, 272 and 273 have examined the exhibits Nos. 3,401 to 3,418 both inclusive in Group No. 37; 3,419, 3,421 to 3,423, 3,426 to 3,430 and 3,433 in Group 38; and 3,452 to 3,455, 3,463 and 3,472 in Group 40, and report to this Committee that they deem the collection well worthy of an award for the following reasons :—

1. Canada has made one of the largest displays in the fisheries building. Its collection, which illustrates the fish and aquatic bird fauna of the country, the way the fishing industry is carried on in the different parts of the Dominion, the mode of handling, preserving, curing and packing the products of its fisheries, is one of the most important and interesting features of the exposition.

2. Its collection of stuffed fish is declared to be the most complete. It is the best in specimens and the richest in variety shown by any exhibitors in the fisheries building. It is particularly rich in regard to the salmonidæ, which is of great value from a scientific point of view. The fish are perfectly mounted, and this collection is entitled to the highest award.

3. The fish in alcohol are in a very good state of preservation, and its collection of fish eating birds is an excellent one as to richness and skilful mounting, and cannot be too highly commended.

4. The exhibit in Group 38, composed mainly of models of boats and trap nets, recommends itself by the neatness of the models, illustrating the mode of fishing, and the progress made during recent years. Their tasteful arrangement contributes greatly to the interest of the exposition.

5. The collection of fish oils is varied and showè articles of excellent quality.

6. We desire to mention specially a large map of Canada, showing the yield and value of the fisheries and the location of the fishing grounds of the country. It also shows as accurately as possible the migrations of the fish having a commercial value, and the progress recently made in Canadian fisheries. This map is of great importance and of special value and interest, and we recommend it to the attention of all those interested in fishery matters.

The assignment cards of the exhibits named above with the reports of the individual judges are inclosed herewith.

Yours,

L. Z. JONCAS,
President.

FISHING BOUNTIES, 1892.

The payments made for this service are under the authority of an Act passed in 1891, 54-55 Vic., Cap. 42 (being a repeal of chapter 96, Revised Statutes), intituled "An Act to encourage the development of the sea fisheries and the building of fishing vessels," which provides for the payment of a sum of \$160,000 annually, under regulations to be made from time to time by the Governor General in Council.

The total number of bounty claims received for the year 1892, was 14,829, against 19,663 in 1891, being a decrease of 4,834 for the year.

The number of claims paid during the year 1892, was 14,442, as against 18,506 in 1891.

The total amount of bounties paid in 1892, on the basis of \$3 per ton to vessels, and \$3 per man to boat fishermen, and \$1 per boat to the owners thereof, was \$159,752.14.

The number of vessels which received bounty in 1892, was 668, with a tonnage of 25,748 tons, showing a decrease of 37 vessels and a tonnage of 785 tons as compared with the previous year.

The number of boats on which bounty was paid was 13,774, and the number of boat fishermen who received bounty was 23,812, being a decrease of 3,927 boats and 9,695 fishermen, as compared with the year 1891.

The total number of fishermen in vessels and boats to whom bounty was paid during the year 1892, was 29,064 as against 38,859 in 1891.

For details of payments to vessels and boats, and for comparative statements in connection with payments since 1882, see Appendix No. 2.

As will be seen by the above figures, there was a large decrease in the number of claims filed in 1892 as compared with the year 1891. This decrease occurs chiefly in applications for boat bounty, and is due to the stringent regulations adopted relative to the collection of claims, as referred to in the report for 1891. Under the new arrangement for filing claims, fishermen were obliged to prove their applications before the officer of the district, who visited each locality on a day appointed by public notice.

This system appears to have given general satisfaction, the fishermen having expressed themselves as pleased with the change, and it has been the means of shutting out a large number of claimants, who had been in the habit of illegally drawing the bounty in past years through claims made before local magistrates.

The effect of this new regulation has been to give greater encouragement to the owners of fishing vessels, as the department was enabled to increase the rate of payment to vessels in 1892 from \$1.50 per ton to \$3.00. The result has been that a large number of new vessels have been added to the fishing fleet during the present year (1893), in anticipation of receiving the increased bounty.

The following particulars in connection with bounty payments, show :

1. Year when bounty was established, 1882.
2. Number of claims paid per year, as follows :—

In 1882.....	11,972, representing	29,932 fishermen.	
1883.....	13,086	do	33,399 do
1884.....	12,468	do	31,279 do
1885.....	14,124	do	33,564 do
1886.....	14,900	do	33,523 do
1887.....	15,416	do	34,387 do
1888.....	15,599	do	34,887 do
1889.....	17,078	do	38,343 do
1890.....	17,959	do	39,050 do
1891.....	18,506	do	38,859 do
1892.....	14,442	do	29,064 do
Total.....	165,550	do	376,305 do

3. Amount of bounty paid per year as follows:—

In 1882.....	\$172,285 47	In 1887.....	\$163,757 92
1883.....	130,344 85	1888	150,185 53
1884.....	155,718 98	1889	158,526 54
1885.....	161,539 39	1890	158,241 01
1886.....	160,903 59	1891	156,891 85
		1892	159,752 15

Total amount of bounty paid.....\$1,728,147 27

4. The proportion of bounty paid per head, or the basis of payments for each year:

In 1882, vessels were paid at the rate of \$2 per ton, one-half being payable to the owner and the other half to the crew.

Boats were paid on the basis of \$5 per man, one-fifth of which went to the owner and four-fifths to the men.

In 1883, the rate to vessels was \$2 per ton, and paid as in 1882. The basis of payment to boats was \$2.50 per man, one-fifth of which was paid to the owner and four-fifths to the men.

In 1884, vessels were \$2 per ton, as in 1882 and 1883; and owners of boats were paid as follows:—

On boats from 14 feet keel to 18 feet keel.....	\$1 00
do 18 do 25 do	1 50
do 25 do upwards	2 00

And boat fishermen \$3 each.

In 1885, vessels were paid \$2 per ton as in previous years. The rate to boats was the same as in 1884, with the admission of boats measuring 13 feet keel. Boat fishermen \$3 each.

In 1886 and 1887 the rate to vessels and boats remained the same as in 1885.

In 1888 vessels were paid at the rate of \$1.50 per ton, one-half to owner and one-half to crew, as formerly. Boats remained the same as in 1885-86-87, and boat fishermen \$3 each.

In 1889 the rate to vessels remained the same as in 1888. Owners of boats were paid \$1 per boat, and boat fishermen \$3 per man. These rates also formed the basis of payments for the years 1890 and 1891.

In 1892 vessels were paid at the rate of \$3.00 ton, divided between the owners and the crew, in accordance with the regulations. Owners of boats were paid \$1 per boat and boat fishermen \$3.00 each.

The total number of vessels to which bounty was paid since 1882, is 8,807 with a tonnage of 335,746 tons, the number of crew receiving bounty being 69,983. Average number of men per vessel is 8.

The total number of boats paid is 156,718, and boat fishermen 306,322. Average number of men per boat, 2.

5. The highest bounty paid per head to vessel fishermen was \$21 in 1892; the lowest 83 cents.

The highest bounty paid per head to boat fishermen was \$4, the lowest being \$2.

The general average paid per head is, \$4.86.

FISHING BOUNTY REGULATIONS.

The regulations governing the payment of Fishing Bounties approved by Order in Council, dated 20th August, 1892, were amended on 25th September, 1893, by the addition of the following clause:—

2. No bounty shall be paid upon fish caught with gill-nets, set at a distance of less than two miles from shore, or with trap-nets, pound-nets and weirs.

It was found that this regulation placed restrictions upon *bona fide* fishermen, and that it did not meet the purpose for which it was intended, consequently the regulations then in force were rescinded and the following substituted therefor, by Order in Council, dated 2nd November, 1893:—

1. Fishermen who have been engaged in deep-sea fishing for fish other than shell-fish, salmon and shad, or fish taken in rivers or mouths of rivers, for at least three months, and have caught not less than 2,500 pounds of sea fish, shall be entitled to a bounty; provided always that no bounty shall be paid to men fishing in boats measuring less than 13 feet keel, and not more than three men (the owner included) will be allowed as claimants in boats under 20 feet.

2. No bounty shall be paid upon fish caught in trap-nets, pound-nets and weirs, nor upon the fish caught in gill-nets fished by persons who are pursuing other occupations than fishing, and who devote merely an hour or two daily to fishing these nets and are not, as fishermen, steadily engaged in fishing.

3. Only one claim will be allowed in each season, even though the claimant may have fished in two vessels, or in a vessel and a boat or in two boats.

4. The owners of boats measuring not less than thirteen feet keel which have been engaged during a period of not less than three months in deep-sea fishing for fish other than shell-fish, salmon or shad, or fish taken in rivers or mouths of rivers, shall be entitled to a bounty on each such boat.

5. Canadian registered vessels of 10 tons and upwards (up to 80 tons), which have been exclusively engaged during a period of not less than three months in the catch of sea-fish other than shell-fish, salmon or shad, or fish taken in rivers or mouths of rivers, shall be entitled to a bounty, to be calculated on the registered tonnage; one-half of which bounty shall be payable to the owner or owners, and the other half to the crew, except in cases where one or more of the crew shall have failed to comply with the regulations, then such share or shares shall not be paid.

6. Owners or masters of vessels intending to fish and claim bounty on their vessels must, before proceeding on a fishing voyage, procure a license from the nearest collector of customs or fishery overseer; said license to be attached to the claim when sent in for payment.

7. Dates and localities of fishing must be stated in the claim, as well as the quantity and kinds of sea-fish caught.

9. Ages of men must be given. Boys under 14 years of age are not eligible as claimants.

9. Claims must be sworn to as true and correct in all their particulars.

10. Claims must be filed on or before the 30th September in each year.

11. Officers authorized to receive claims will supply the requisite blanks free of charge, and after certifying the same will transmit them to the Department of Marine and Fisheries.

12. No claim in which an error has been made by the claimant or claimants shall be amended, after it has been signed and sworn to as correct.

13. Any person or persons detected making returns that are false or fraudulent in any particular will be debarred from any further participation in the bounty, and be prosecuted according to the utmost rigour of the law.

14. The amount of the bounty to be paid to fishermen and owners of boats and vessels will be fixed from time to time by the Governor in Council.

Trap-net, pound-net and weir fisheries, referred to in clause 2, have always been excluded from the bounty catch, although not specially mentioned in the regulations. They are allowed only under special license and therefore fall within the category of fisheries not included in the bounty.

The regulation respecting gill-nets was made in order to exclude a class of claims of persons who are not in reality fishermen and should not participate in the bounty. The men excluded under this regulation are those who earn their living on land, and do not follow the fishing business as fishermen do. They simply set their nets near the shore, to which their attention is not required for more than an hour or two each day. While these nets are set the owners are engaged in their usual daily avocations and depend on the nets to do the fishing. To this class of people, it is

held that the bounty should never be paid, it being unfair to legitimate fishermen who are engaged in this perilous business and reduces the share of the bounty, to which they are justly entitled.

In reporting on this kind of fishing in the Bay of Chaleurs, Dr. William Wakeham, Fishery Officer for the Gulf Division, in the province of Quebec, says :—The claimants are mostly farmers and are not in reality fishermen. They fish by setting out gill-nets for herring. These nets are set inshore, mostly in coves and bays to stakes or moorings and are only visited in the mornings and evenings. The bulk of this herring fishery is made in the spring and lasts about a month, ninety per cent of this herring, which during the first weeks of the fishery is all unspawned, is used for manure, it being claimed that, by being put to this use it finds its best market. After the close of the spring herring fishery there is a slack time, during which the nets are not fished. About the end of July they are, however, put out again, and are fished for mackerel and fall herring off and on, until the close of the season. During this last part of the season, very few fish are taken and very little time is spent daily over the fishing. Dr. Wakeham further adds, that it could not have been the intention of the framers of the Bounty Act to allow a bounty to be paid to such fishermen or for such a method of fishing as that above described, and although it is not barred for bounty, there is no doubt it should be.

This regulation will not in any way interfere with *bona fide* fishermen, but will be the means of securing for them a larger share of the appropriation granted annually as bounty to fishermen.

FISHING BOUNTY OFFICERS AND DISTRICTS.

Having also in view the object of further improving the system of collecting claims, several new districts have been made.

Following is the list of officers and districts for 1893 :—

NOVA SCOTIA.

Name of Officer.	Extent of District.
A. C. Bertram, Inspector of Fisheries, North Sydney.....	The county of Cape Breton.
D. F. McLean, Fishery Overseer, Port Hood.....	That portion of the county of Inverness lying south of and including Broad Cove Chapel.
James Coady, Fishery Overseer, Margaree Forks.	That portion of Inverness County lying north of, but not including, Broad Cove Chapel.
Alfred E. LeNoir, Fishery Overseer, Arichat.....	Madame and other islands in the county of Richmond lying south of Lennox Passage and St. Peter's Bay.
Duncan Cameron, Fishery Overseer, St. Peter's..	That portion of Richmond County lying west of St. Peter's Canal and north of Lennox Passage.
John Murchison, Fishery Overseer, Grand River..	That portion of the county of Richmond lying east of St. Peter's Canal.
Charles L. Campbell, Fishery Overseer, New Campbellton.....	The county of Victoria.
R. Hockin, Inspector of Fisheries, Pictou.....	The counties of Pictou and Antigonish and the northern coast of Colchester County.
William Cameron, Fishery Overseer, Guysboro'..	That portion of Guysboro' County extending from Antigonish county line to, but not including, White Point.

LIST of Officers and Districts for 1893—*Continued.*

NOVA SCOTIA—Concluded.

Name of Officer.	Extent of District.
Allan McQuarrie, Fishery Overseer, Sherbrooke.	That portion of Guysboro' County extending from, and including, White Point to Halifax County line.
Robert Gaston, Fishery Overseer, Pope's Harbour.	That portion of Halifax County extending from Guysboro' County line to, and including, Pope's Harbour.
George Rowlings, Fishery Overseer, Musquodoboit Harbour.....	That portion of Halifax County extending from Pope's Harbour to Dartmouth.
Alfred Ogden, Fishery Officer, Pictou.....	That portion of Halifax County extending from Bedford Basin to Nine Mile River.
John H. Bartlett, Fishery Overseer, Terence Bay.	That portion of Halifax County extending from Nine Mile River to Lunenburg County line.
David Evans, Fishery Overseer, Chester.....	The eastern section of Lunenburg County, from Halifax County line to and including Mahone Bay.
Wm. M. Solomon, Fishery Overseer, West La Have Ferry.....	That part of the coast of Lunenburg County, west of, but not including, Mahone Bay, to Queen's County line.
J. N. Freeman, Fishery Overseer, Liverpool.....	The county of Queen's.
W. J. McGill, Fishery Overseer, Shelburne.....	The eastern section of Shelburne County, extending from Queen's County line to Clyde River.
E. S. Goudey, Fishery Overseer, Barrington.....	The western section of Shelburne County extending from Clyde River to Yarmouth County line.
J. A. Hatfield, Fishery Overseer, Tusket.....	The county of Yarmouth.
J. R. Kinney, Inspector of Fisheries, Yarmouth..	The counties of Digby and Annapolis.
James S. Miller, Fishery Overseer, Canning.....	The county of King's.

NEW BRUNSWICK.

Capt. J. H. Pratt, Inspector of Fisheries, St. Andrew's.....	The county of Charlotte.
Jos. O'Brien, Fishery Overseer, Carleton.....	The county of St. John.
W. F. Hannah, Fishery Overseer, Richibucto....	The county of Kent.
J. G. Williston, Fishery Overseer, Bay du Vin..	That part of the coast of Northumberland County extending from Kent County line to Point aux Carr.
Lemuel Abbott, Fishery Overseer, Chatham.....	From Point aux Carr on the south side of Miramichi River to Oak Point on the north side in the county of Northumberland.
Prudent Robichaux, Fishery Overseer, Upper Neguac.....	From Oak Point to Gloucester County line, in the county of Northumberland.
R. A. Chapman, Inspector of Fisheries, Moncton.	The counties of Westmoreland and Gloucester; and from Belledune to Dalhousie in the county of Restigouche.

LIST of Officers and Districts for 1893—*Continued.*

PRINCE EDWARD ISLAND.

Name of Officer.	Extent of District.
Edward Hackett, Fishery Officer, Charlottetown.	The county of Prince.
A. Lord, Charlottetown.....	The county of Queen's.
Michael McCormack, Fishery Overseer, Souris...	The county of King's.

QUEBEC.

County of Bonaventure.

W. C. Ross, Fishery Overseer, Hopetown.....	That part of the coast of Bonaventure County extending from Point Marquereau to, but not including Paspebiac.
J. L. Smith, Fishery Overseer, New Carlisle....	That part of the coast of Bonaventure County extending from and including Pasbebiac to Grand Cascapedia River.
Peter Cyr, Fishery Overseer, Robitaille.....	That part of the coast of Bonaventure County extending from Grand Cascapedia River to Maguasha.

County of Gaspé.

Henry Jones, Fishery Overseer, Little River, West	That part of the coast of county of Gaspé extending from Point Maquereau to and including corner of the Beach.
G. T. Annett, Fishery Overseer, Peninsula.....	That part of the coast of Gaspé extending from, but not including, corner of the Beach to and including Cape Rosier.
Pierre Theriault, Fishery Overseer, Griffin Cove..	From, but not including, Cape Rosier to Fame Point.
Jos. Lemieux, Fishery Overseer, Mont Louis....	From Fame Point to Duchesnay Township line.
J. I. Letourneau, Fishery Overseer, Ste. Anne des Monts.....	From Mont Louis Township line to Rimouski County line.
J. A. Chevrier, Fishery Overseer, Amherst, M.I.	Amherst and Entry Islands.
P. L. Joncas, Fishery Overseer, House Harbour, M.I.....	All Magdalen Islands except Amherst and Entry.

County of Rimouski.

Johnny Joncas, Fishery Overseer, Matane.....	That part of the coast of Rimouski County extending from River Blanche to Gaspé County line.
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LIST of Officers and Districts for 1893—*Concluded.*QUEBEC—*Concluded.**County of Saguenay.*

Name of Officer.	Extent of District.
N. A. Comeau, Fishery Overseer, Godbout	From Manicouagan to Baie des Rochers.
T. Migneault, Fishery Overseer, Moisie	From Baie des Rochers to Point St. Charles.
Geo. Du Berger, Fishery Overseer, Mingan	From Point St. Charles to, and including, Esquimaux Point.
Geo. Gaudin, Fishery Overseer, Natashquan	From, but not including, Esquimaux Point to Natashquan River.
Capt. S. Belanger, "La Canadienne" steamer, Gaspé Basin	From Natashquan River to Cape Whittle, and Anticosti Island.
John LeGouvié, Fishery Overseer, La Tabatière	From Cape Whittle to Checatica.
W. H. Whitely, Fishery Overseer, Bonne Espérance	From Checatica to Blanc Sablon.

THE OYSTER FISHERY.

The history of the oyster fishery in the Dominion has already been fully dealt with in previous reports of this department. Mention is therein made of the individual efforts made by a few persons towards the introduction of oyster culture in this country by private enterprise, which efforts, the department has reason to believe, were reasonably successful. It, however, soon became evident, that this individual action was not sufficient, to save the fishery from total extinction, and that some radical measures were necessary to prevent the complete depletion of our rich oyster beds, some of which, such as the Shediac, Cocagne, Buctouche, Caraque, &c., have been so much injured in the past by over-fishing and reckless modes of fishing.

In 1887, a commission was appointed to inquire into the condition of the oyster fishery in Canada. Several suggestions and recommendations were made, but these were not acted upon. In 1890, the Minister of Marine and Fisheries, in a report to the Privy Council, expressed his approval of the following recommendations of the Commissioners:—

1. Defining the limits of oyster beds, and adopting a system of licenses in connection therewith.
2. Prohibiting dredging for mussel mud in the immediate vicinity of oyster beds.
3. Fishing certain areas only during alternate years.
4. Retaining the present close season, viz., from 1st June to 15th September.
5. Prohibiting the catching of *round* oysters under 2 inches diameter of shell, or *long* oysters under 3 inches of outer shell.
6. Prohibiting fishing in localities where the supply was nearly exhausted.
7. Appropriating a certain sum for the formation of new oyster beds and the re-stocking of exhausted fisheries.

And the Minister further recommended the adoption of the following regulations:—

1. No one shall fish for or catch any oysters in the Dominion of Canada, except under the authority of the Minister of Marine and Fisheries.

2. No one shall fish for, or possess, any oysters between the 1st day of June, and the 15th day of September in each year, both days inclusive.

3. No one shall fish for, catch or possess any oysters less than 2 inches broad, or less than 3 inches in length. All oysters taken under these dimensions to be immediately returned to the water, under penalty of fine and forfeiture of all material, implements or appliances used, and the cancellation of the license.

4. Mud-digging is prohibited within 200 yards of any live oyster bed, and then only at such place or places, as may be prescribed by a fishery officer.

It was further recommended that the first regulation should not come into force until 15th September, 1890, as the fishing season had already began.

The Privy Council approved of the above regulations, except in the case of mussel mud-digging, where it was recommended to make the distance 200 feet instead of 200 yards, as suggested. The Council further directed that the regulations should not take effect until a survey was made.

In order to facilitate applications, instructions were issued to guide surveyors in the preparation of plans and descriptions for applications for oyster fishing licenses.

Finding from inquiry, that considerable satisfaction was expressed among the residents of localities where exhausted beds were to be found, at this action of the department, a form of petition was circulated, asking that certain beds be set apart for the purpose of re-stocking, and that fishing be prohibited therein for a certain number of years.

In response to this appeal, petitions were received from a great many places in New Brunswick, Prince Edward Island and Nova Scotia.

An appropriation of \$5,000 having been voted by Parliament, for the survey of oyster beds, and for the purpose of assisting in the planting and formation of new ones, instructions were given for the survey of Shediac Harbour, and an Order in Council was subsequently adopted setting apart about 270 acres of water area in the above named locality, for the purpose of carrying on natural and artificial reproduction of oysters. It was expected that these operations could have been inaugurated in the fall of 1891; but so much difficulty was experienced in securing the services of a reliable expert, that the experiments had to be postponed until the spring of 1892.

Inquiries were made through the High Commissioner for Canada, in London, and Mr. Fabre, in Paris, for the purpose of securing the services of an expert to take charge of the operations. This led to the engagement of Messrs. Frederick and Ernest Kemp, who had had considerable experience in connection with the Whitstable Oyster Company, the largest and most important and influential corporation of the kind in Great Britain. The Messrs. Kemp arrived in Canada on the 5th June, 1892, and immediately began the examination of the Shediac oyster-beds. A careful inspection of the whole of Shediac Bay convinced them that it would be a suitable place for natural oyster culture, although the beds were found to be in a most deplorable condition through want of care and attention and the ruthless manner in which the mussel-mud diggers had cut them all to pieces, leaving a lot of disjointed patches with an immense accumulation of soft mud around the beds. The northern portion of the bay was not found to be as favourable for oyster culture as the southern part. The limits previously set apart by Order in Council were accordingly changed, the northern portion thereof being left out.

The Messrs. Kemp also examined the oyster-beds at Buctouche, Cocagne and Richibucto, which they found to be in about the same conditions as those at Shediac.

A fact worthy of remark is that throughout the whole of their inspection, the experts did not find a single marine enemy to the oyster. The cause of the depletion of these beds was ascribed to reckless modes of fishing; fishing during the close season, and fishing through the ice, by which large numbers of small and unmarketable oysters are left to perish on the ice and the beds destroyed by the mud which falls on the oyster beds when the ice thaws in the spring.

During that year the experts also examined the oyster beds in Richmond Bay, Malpeque, Prince Edward Island, which they pronounced to be nothing short of a gold mine. Some of the beds are extensive, and the stock compares well with that of cultivated grounds. The resources of the bay appear to be enormous. Where soil could be found, there were oysters and oyster brood. In no single instance, were death or a marine enemy met with.

In North or York River, near Charlottetown, there is very little soil or oyster ground, but oysters are said to exist above the bridge. In West or Elliott River, at Long Creek, abundance of oyster brood in a healthy condition was noticed, growing very fast. In Vernon River, three hauls of the dredge brought up 30 oysters and 614 brood. Orwell Cove and the grounds in Orwell Bay were said to compare favourably with those in Vernon River. In East Hillsboro' River, the beds were found to be completely covered with oyster brood of very fine shape and form different from the oysters found on other beds in this part of Prince Edward Island.

Taking everything into consideration, the experts came to the conclusion that there was no danger of the oyster beds becoming depleted if the laws of nature are observed and the recommendations which they made carried out.

On completion of their labours in Prince Edward Island, it being found that the presence of Mr. Frederick Kemp was no longer required, he was permitted to return to England, and Mr. Ernest Kemp was engaged, for a period of three years, to continue the work. This he is doing by preparing the beds for the purpose of re-stocking them in the spring. A small steamboat was employed to dredge on one of the largest beds in Shediac Harbour. Four dredges were at work, removing all the old shells, weeds and refuse which covered these beds, being very careful to pick out all live oysters and brood brought to the surface. These were again relaid on different parts of the harbour, after being carefully separated from the shells or oysters they had adhered to, in order that the shape of the oyster may develop more fully. The cultch and shells, which had accumulated on these beds, were removed from the top and placed on the mud, on the outside edges, or in some of the holes caused by the mud-diggers. The ground was cleaned on the edges; the beds were made much larger, and the soil made ready for re-stocking with oyster brood. Owing to some delay in procuring the necessary oysters from Prince Edward Island, no planting was done during the fall of 1892. In view of the lateness of the season, the danger from frost, snow, and the change of water, Mr. Kemp deemed it more prudent to delay these operations till the following spring, which he considers the best time for planting, as the oysters will then grow much faster if placed in shallow water during the spring and summer months than if placed in deeper water, as the sun causes the water to become much warmer, the oyster being very sensitive to the action of light and heat, which promotes a rapid growth. Oysters planted in the autumn are not so likely to thrive, as owing to the change of soil and falling temperature, the oyster is not properly acclimated before winter sets in, which very often proves disastrous. Oysters grow but very little during the winter months, consequently it is all risk and loss, with no gain, although there are exceptions in every case.

Mr. Kemp sends the following report of his operations for the season of 1893:

BY ERNEST KEMP.

On the completion of the inspection of oyster grounds last year, I received instructions to locate the most suitable area for oyster culture in Shediac Harbour, which area was set apart by Order in Council on the 16th day of December, 1892, as follows:—

"All the waters of Shediac Harbour extending from a line drawn south 67° west (due west magnetic) from Mr. Petipas' house on Shediac Island, to Mr. Wilbur's tannery, on the north side of Wilbur's Cove, southwardly to a line drawn from the south extremity of Snake Point; $50^{\circ} 7' 30''$ west (west by south $\frac{1}{2}$ south magnetic), to the corner of Moncton Road; the points where the boundary lines above described cut the high water on shore being marked in each case by a square cedar post, inscribed O. R. (oyster reserve), and the whole including below low water mark an area of 980 acres, be the same more or less."

This area can, however, be extended further north to the entrance of Shediac River, if required, as oyster beds are lying in that locality, a plan of this area having been submitted to the department on the 5th December, 1891, made by Robert Simpson, surveyor, of Pictou, N.S.

Within the first named area, the work of preparing and cleaning the oyster beds commenced last fall, until the ice stopped operations, and was resumed in the spring and carried on without intermission up to the present day.

These beds require a great amount of cleaning before planting, as it must be understood no attention has ever been paid to them for the purpose of protection or prevention of deterioration and extinction; they have gradually been growing towards the surface of the water from time immemorial. Originally this harbour must have been very deep, as the mussel-mud diggers, cutting through an oyster bed to a depth of twenty or twenty-five feet, find that it consists of dead and decomposed shells which have accumulated for ages. As these beds have grown up the silt or soft mud has filled in, and become overgrown with long weeds or eel grass. These weeds will grow wherever they can find a hold at the bottom, their length being from six to nine feet, in many cases beds are entirely overgrown, and in this way some of the beds have become completely choked or smothered. The weed dies off to a certain extent during the winter and adds another layer to the soil below; all this has to be cleaned off, and the old dead shells, removed from the surface of the beds, before it is advisable to plant oyster brood. These beds are marked by beacons placed on the outside edges, so that the exact position may be observed at a glance.

This work has been carried on by means of a small steamboat (hired for the purpose) towing dredges over the grounds. About a bushel is collected at a haul of shells, stones, oysters, brood, weed and mud, in fact anything that is lying in its way; this is all culled over, the oysters and brood are then separated from the contents of the dredge, which is commonly termed "cultch." The oysters are placed on another bed, and this "cultch" is used in filling up the holes caused by the mussel-mud digger, or is placed on the margins of the beds. The dredge used for this purpose is nearly three feet wide. It is a rake or bit formed of iron about two inches wide with a net attached behind it, and as it disturbs or turns over the soil, the latter is caught in the net; the sides of the bit are joined by two pieces of iron about three feet six inches long, with a ring at the end to which is attached a rope, and in this way it is towed and brought when required to the surface. It is also strengthened by a piece of iron running from the ring two-thirds the length of the sides, and connected by a cross-piece of iron holding the two outside limbs in their place; to it also is secured the upper side of the net. I have used in addition, two rakes for removing the weed. These consist of an iron bit or rake, six feet long, and three inches wide, attached to two other pieces of iron in the shape of a triangle. This mowing dredge towed over the beds at first, takes the heaviest of the weed off. By these means the beds are cleaned.

After the ice set in, I left for Ottawa, and reported myself for duty. I stayed until the middle of March, having previously made inquiries as to the condition of the ice in Shediac Bay. I was informed by Inspector Chapman and others, that the ice was rotting; I wished to make an examination of the ice upon the oyster beds to see what effect it had upon them. On my arrival in Shediac I commenced an examination of the ice on the different parts of the bay. It varied in thickness from two feet to thirty inches, although I was informed that in some years three feet of ice will be found. This is caused by snow falling on the ice and freezing solid, one layer after another resting upon the ice. The average thickness on the beds being 24 to 26 inches, oysters and clams were taken from the bed with 3 feet 6 inches of water between the ice and the bottom, and were not hurt by the frost. In no instance did I find the ice resting on the beds, as it does not pile where the beds are situated. My opinion is that oysters will not come to any harm if planted in a depth of 4 feet of water.

Operations were again commenced on the 29th of April. I was occupied in cleaning and preparing the beds, the first one being finished in the latter part of

May, and on the 26th of the same month planting of oyster brood commenced, obtained from Buctouche and Cocagne. The oysters planted were chiefly small ones, averaging about 1,700 to a barrel; some of these oysters were in clusters and bunches, or had adhered to shells or stones, &c., and were separated where it was possible to do so without breaking or killing them. This separation gives the oyster a better chance to grow into its natural shape, as oysters grow much better singly than when in clusters or bunches. The total number planted during the spring was 227 barrels.

By planting small oysters on a bed, their growth will result in large proportionate returns and profit. A young oyster is not so likely to die, when transplanted to another bed, as when older, nor, is it any advantage to transplant a full grown oyster, unless for immediate use. In the oyster trade one great advantage is the rapid growth of the bivalve, when as is the case, they are bought and sold by measure.

Up to the 29th June, 269 barrels of clean shells were scattered over the grounds for the purpose of catching the spat where the oysters have been planted and 184 bundles of twigs or brushwood have been collected and attached to stones and placed on the oyster grounds for the same purpose.

After the completion of the above, another bed was cleaned, situated off Mr. Hannington's shore, and marked No. 2 on the plan. This bed required a large amount of labour to remove the shells, weed, mud, &c., from the surface, which were deposited in a cleft running through the centre of the bed. This bed extends in a straight line 300 and 400 yards and is about 100 yards wide, having rather more water on it than the first one, and is now in good condition. The oysters and brood which were taken from this bed were replanted on the outside bed.

After the necessary cleaning, 6 carloads of clinkers or railway engine cinders were laid on a soft place which divided this bed into two parts. This has given it a firm bottom, after which a layer of shell was deposited over the cinders, giving the bed an even shape. It was completed at the end of October, but too late in the season to lay small oysters down with any chance of profitable results.

After completing bed No. 2, I commenced cleaning another area of ground there rather irregular in shape, but when cleaned likely to make a very good bed for planting oysters upon. It will not be completed before the ice forms, as it was very thickly covered with long grass when first discovered, and the ice has already made its appearance along the shores of the harbour.

The area which was planted last spring has since been examined, and there are several traces of this year's spat to be seen, upon the bed. The oysters which were laid have grown and are looking very healthy, and the bed is clean and free from weed.

It is proposed that the reserved area set apart for oyster culture in Shediac Bay should be kept closed from public fishing until the 16th September, 1896; that no person or persons should be allowed to fish for oysters, clams, or any other shellfish on any of the beds in the said area, whether they are under cultivation or otherwise; by this method it will then be ascertained, whether by the closing of old and disused beds and allowing them to remain dormant for a certain length of time will improve them. At present these old beds are of little or no value to any fisherman, as there are very few oysters lying around. It will not be taking the privilege of fishing away; but will act as an experiment to find out whether these beds will replenish themselves, if left to nature and undisturbed by man.

There are several of these small patches or beds within the inclosed area, others are to be found on both sides of the boundary lines of the area, where fishermen can fish, if they feel so disposed, although at the present time there are very few oyster fishermen around Shediac, the beds having for some time past become so depleted that scarcely any one could obtain a livelihood at the work.

A fishery warden would be required to watch these grounds, to protect them from being robbed, and when opened for fishing those fishermen privileged to fish might make a report of the oysters caught to the warden, that a return may be made to ascertain what quantity of oysters are taken from the beds.

Further, these beds might be fished every alternate year. For instance, taking the bed marked No. 1 to commence with, and say half the area, for the first season,

and the year following, bed marked No. 2, with the other half of area to be opened for fishing the following season, thus giving each portion of the grounds a rest, so that the undersized and young oysters may attain their proper growth, and be fit for market.

It is very important that a size limit on oysters should be fixed; as these oysters are of an oblong shape, it would be desirable that no oysters under three inches in length should be landed or taken from any beds in the Maritime Provinces, (except for authorized purposes) that the young stock may be preserved and allowed to grow.

Having carefully measured and watched the sizes of different oysters, I am convinced that this is the smallest size which should be taken for market. The average size of this class of oyster is about 4 inches, but some are 6, 7 and 8 inches in length.

Round oysters two inches diameter of shell are very small, that being the very smallest size that should be allowed to be taken. At this size the oyster is not nearly full grown.

These beds, when opened for fishing, should either be fished with tongs as used in Prince Edward Island, or dredges like those now in use in cleaning and preparing the grounds. The rake, as used at present, ought to be entirely condemned, where the bottom is level, as it always forms banks or mounds on the bed, making the bottom uneven; the shells being continually raked away from one spot and piled in another.

The tongs gather up oysters and cultch from under the boat, and after taking the oysters from the tongs the shells are allowed to fall in very much the same place from where they were taken. Where tongs are used in Prince Edward Island, most of the grounds appear to be in a flourishing condition, owing to the manner in which the soil is collected from the bottom. The young oysters are not hurt and at the same time the shells removed are cleaned, and the undersoil not disturbed as by the use of the rake, which is so often apt to smother and bury the young oysters. The dredge is towed over the beds and collects a larger quantity from the bottom than either the rake or tongs, the oysters are then culled out, and the refuse, consisting of shells, brood, &c., returned to the beds, while the boat is in motion, thus cleaning the grounds. The dredge disturbs the weeds and shells, keeping the beds clear of silt; and often extending them, as shells and refuse are sometimes dragged and thrown over, on the outside edge of the beds.

No mud-diggers should be allowed to work at any time on the reserved area.

Persons who are allowed to fish on these grounds should hold a license to do so, with the number of his license painted on the bow of his boat, to be renewed each year, or cancelled at any time at the discretion of the Minister.

The oyster grounds in this Dominion need more protection, in order to make as great a success as possible. We look at the present state of things, and we find that oysters in Canadian waters are not increasing, but rather diminishing, the demand being greater than the supply; it is therefore necessary to have regulations made, and carried out, to preserve and protect them.

I therefore suggest that the following rules and regulations, if approved of, be carried out in the Maritime Provinces, it being a matter of very great importance to protect this valuable industry with little delay:—

1. Oysters shall not be fished for, caught, killed, bought, sold, or had in possession, between the 1st day of June, and the 15th day of September in each year, both days inclusive.

2. All winter fishing through the ice for oysters or any other shellfish, is prohibited.

3. Oysters shall not be fished for, or caught on Sunday or during the night time.

4. No person or persons shall at any time, catch, bring on shore, or be in possession of any round oyster that does not measure fully two inches in diameter of shell, or any long oyster that does not measure fully three inches of shell.

5. No person or persons shall be allowed to dig mussel mud within 200 yards of any live oyster-bed, and then only, at such place or places as may be prescribed by a fishery officer.

6. Persons fishing for oysters must first obtain a license, which would include the registration and number of their boats, the latter painted in white oil colour letters, on a black ground, with the initial letter of the port to which they belong, on the boat's bows, the letters to be at least 8 inches in length. The fee for such license is \$1.00 per annum.

7. No rake shall be used on any oyster grounds that has been prepared by the department, only tongs or dredges to be used on such beds. Patterns of the dredge can be obtained by application to the department, when a dredge will be forwarded to the fishery officer of the district, from which patterns may be taken.

8. Taking oysters from licensed beds is made larceny.

In support of the above suggested rules, I attach the following reasons:—

1. The above dates for the close season are fixed during the period in which oysters are spawning and growing, and while in this state are really unfit for food; also the edges of the oyster shells during the summer months are very thin and brittle, owing to their growth, which is fast, during the warm weather; no oysters ought to be disturbed on the beds or caught between the above dates.

2. Winter fishing for oysters through the ice is very injurious to the beds in every way. Fishermen tear up the ground by the long toothed rakes, collect large quantities of shells and refuse upon the ice, which is taken away from the natural bed or falling through the ice in a heap upon other beds, causes these beds to become very uneven. All the small oysters and brood are left behind to perish by the frost, and the future supply of oysters is seriously endangered. I would suggest that there be added to this clause the words "or any other shellfish," because persons may attempt to catch clams through the ice. To do so they often fish on an oyster bed, and do the same amount of damage to these beds and the young brood as if they were actually fishing for oysters. These words inserted in this clause, would not allow a loophole on the supposition that the act only referred to oysters.

3. Fishing for oysters is probably not carried out on Sunday, but in forming new regulations it may be advisable to insert the above clause. No fishing for oysters during the night time should be allowed either, as brood is very apt to be destroyed, poachers would be checked to a certain extent, and licensed beds, or reserved areas would be protected from being robbed during the night.

4. Oysters of a less size than the above, are not nearly large enough for market, nor when sent to market will they realize the same value as a carefully selected oyster. On the other hand, it is taking away the very backbone from an oyster bed, for this class of oyster must be retained on the grounds to keep up the supply. Without the small oysters, we can never expect to obtain the large ones. At the present time, thousands of these young oysters are landed, the largest merely are selected for market, and the remainder allowed to rot in heaps, instead of being returned to the water until they are of a marketable size.

5. To prohibit the mussel mud-digger from working altogether, would cause a deal of dissension, although it is very destructive to any oyster ground, and should only be permitted to work on extinct beds, which have been previously destroyed by these machines. These mud-diggers working near live oyster beds would cause a heavy sediment to drift and settle upon the beds in the vicinity, smothering the oysters and brood on the live beds, and thus doing a great amount of damage. When mud diggers have once been on a bed it is almost entirely useless for any other purpose whatever. An oyster bed is often cut to a depth of 20 or 25 feet and 10 to 15 feet wide. It can easily be seen what destructive machines they are. It is very important that they should only be allowed to work in places specified by the fishery officer of the district.

6. Under the license system for oyster fishing, persons would be less reckless in their fishing, and would, in my opinion, adhere more strictly to other rules laid down for the protection of this industry; returns would also be secured, showing

how many persons and boats were engaged in this calling. The lettering and numbering of boats would in a measure protect persons, who are holding licenses for oyster areas, from being plundered ; it would also assist the fishery officer when boats are found poaching, during the close season, the number of the boat has simply to be taken in order to secure the offender. The license fee of \$1.00 per annum ought to be charged on all engaged in this industry, it being only a nominal sum, and the fishermen would get this back again, out of his first days' work. Oyster regulations, with fines for non-compliance should be printed on license forms issued.

7. The rake, as used at present, ought to be entirely prohibited. Where the bottom is level, it always forms banks and mounds, making it uneven by continually raking the shells away from one spot, and piling them in another. The tongs gather up oysters and cultch from under the boat, and after taking the oysters from the tongs, the shells are allowed to fall in very much the same place from where they were taken. Where the tongs are used in Prince Edward Island, most of the grounds appear to be in a flourishing condition, owing to the manner in which they collect the soil from the bottom, not hurting the young oysters, and at the same time cleanse the shells they remove, and do not disturb the undersoil, like the rake, which is so often apt to smother the young oysters. The dredge is towed over the beds, and collects a larger quantity from the bottom than either the rake or tongs, the oysters are then culled out, and the refuse, consisting of shells, weed and brood returned to the beds, while the boat is in motion, thus cleaning the grounds. The dredge disturbs the weed and shells, keeps the beds clear of silt, and extends them, while shells and refuse are sometimes dragged and thrown over on the outside edges of the beds.

It would be advisable to have a few dredges made, if required, for persons to obtain a pattern from, for when once the dredge is introduced into the Dominion it will almost certainly supersede the rake, and open up a new and improved feature in the oyster industry. Oysters can by its means be obtained from any depth of water.

8. This rule would greatly assist to protect the holders of licensed areas, and offenders, if caught, would suffer just penalties.

Should the above draft of regulations appear to be too stringent, it is entirely for the benefit of the fisherman himself, and the beneficial effect would soon be seen. Complaints about the depletion of beds or the scarcity of oysters prevail everywhere.

I also submit for your approval, proposed regulations for the Oyster Fishery of British Columbia :—

1. Oysters shall not be fished for, caught, killed, bought, sold, or had in possession, between the first day of June and the 15th day of September in each year, both days inclusive.

2. Only full sized oysters are to be taken from the beds.

3. Oysters which dry at ebb tide shall only be picked by hand. No rake or other instrument to be used to obtain oysters from such beds.

4. No brood cultch or shells to be brought on shore from the beds.

5. All oyster beds used for private culture must be licensed. For fishing upon public beds, a license fee of \$1.00 per annum, payable by each person, which would include registration of boat.

6. Suitable reserves to be made or allowed for the Indians free.

7. The department to hold the right of all waters in the Dominion for the purpose of licensing and protecting the same.

8. The above regulations to be binding on all persons whether in possession of licensed areas or fishing on public beds ; Indians not excepted.

9. Oysters shall not be fished for, picked or caught on Sunday, or during the night time.

10. Taking oysters from licensed beds is made larceny.

In support of the above rules I attach the following reasons :—

1. As no close season has yet been observed in British Columbia, it would be advisable for this regulation to be in force throughout the whole Dominion, and that this regulation should be made with little delay is important. It would give the oysters a better chance of spawning, and increasing the supply early.

2. These oysters being very small, the largest not measuring more than 2 inches in diameter, and the smallest say $1\frac{1}{8}$ inches in diameter, it is very difficult to define a size limit in this case. The fishermen who pick these oysters should know whether it is full grown or only half grown, and the latter should be returned to the beds.

3. If oysters are only picked by hand, it would assist regulations 2 and 4 to be kept in force, the smaller ones will then be left to grow, and the shells or cultch will remain for oyster spat to fall upon.

4. Both Indians and whites are in the habit of collecting oysters, brood, cultch and shells, while the tide is low, and at high water, then separate these oysters from other refuse (brood included), and deposit above high water mark to rot. If these were left at or near low water mark, they would act as collectors for the spat to adhere to.

5. This regulation would apply as in No. 6 for the Maritime Provinces.

6. An area reserved for the Indians is obviously desirable on many grounds.

7. The department should have control of all waters in the Dominion where oysters are found, either for the purpose of licensing, reserving areas for cultivation, or protecting them if necessary from total extinction.

8. No explanation in reference to this is required.

9. Same reason as No. 3 in the Maritime Provinces.

10. Same reason as given in No. 8 for the Maritime Provinces.

The above measures would materially protect the oyster beds in the Dominion and vastly increase their yield and value.

SCHEDULE of Oyster Fishery Licenses issued 1891 and since in the Dominion of Canada.

Name of Licensee.	Residence.	Locality.	Date of License.	Period of License.	Annual Fee.	Amount due.
		<i>Nova Scotia.</i>			\$ cts.	
Alex. McNab.	Upper Malagash.	Part of West Tatamagouche Bay.	Nov. 1, '92.	9 years.	22 00	\$22 due 1st Nov., 1893.
Andrew Kavanagh.	West Tatamagouche.	South side McNab's Bay, Tatamagouche.	July 1, '93.	9 do	4 00	\$4 due 1st July, 1894.
Dr. Havelock Clay.	Pugwash, N.S.	Page's Creek, Pugwash River.	May 1, '93.	9 do	15 00	\$15 due 1st May, 1894.
George E. Stewart	Malagash, N.S.	Part of Tatamagouche Bay.	July 1, '93.	9 do	2 50	\$2.50; license cancelled.
		<i>New Brunswick.</i>				
D. Hatton & Co.	Montreal.	Bay du Vin River, Co. Northumberland.	Oct. 1, '91.	15 do	81 00	Steps taken to have license cancelled.
Williston, Hatton & Co.	Bay du Vin.	Eel River, Bay du Vin, Co. Northumberland.	May 1, '93.	20 do	30 00	\$30 due 1st May, 1894.
James Barnes.	Buctouche, N.B.	Part of Buctouche Harbour, Co. Kent.	do 1, '93.	9 do	6 50	\$6.50 due 1st May, 1894.
		<i>Prince Edward Island.</i>				
Joseph Hayley.	Ruskin.	Part of Pownal Bay, Co. Queen's.	Dec. 1, '91.	9 do	2 00	\$2 due 1st Dec., 1893.
Chas. A. Hyndman.	Charlottetown.	North River and Ellen's Creek, Co. Queen's.	do 1, '91.	9 do	40 00	\$40 due 1st Dec., 1893.
John W. McLeod.	Orwell Cove.	Orwell Cove.	May 1, '93.	15 do	2 00	\$2 due 1st May, 1894.
D. A. Mackinnon.	Georgetown.	Budenell River.	June 1, '93.	9 do	2 00	\$2 due 1st June, 1894.
Patrick Duffy.	South Port.	Hillsboro River, Queen's Co.	Sept. 1, '93.	9 do	2 00	\$2 due 1st Sept., 1894.
		<i>British Columbia.</i>				
John Cant.	Oyster Harbour.	Lots 1 and 2, Oyster Harbour.	July 1, '92.	9 do	38 50	\$38.50 due 1st July, 1894.
John Belyea.	Nanoose Bay.	Nanoose Bay.	Oct. 1, '93.	9 do	7 50	\$7.50 due 1st Oct., 1893.
Louis Lazare.	Sooke Inlet.	Sooke Inlet, Cooper Cove.	do 1, '93.	9 do	10 00	\$10 due 9th Oct., 1893.
do	do	Further portion of Sooke Inlet, Cooper Cove.	do 1, '93.	9 do	1 75	\$1.75 due 1st Oct., 1893.
do	do	Roche Cove, Sooke Inlet.	do 1, '93.	9 do	3 00	\$3 due 1st Oct., 1893.

ARTIFICIAL FISH-DRYING.

The first operations in the curing of cod in the establishments of the Maritime Provinces are performed on the splitting table. So soon as the cod are landed on the stage and counted, the men go to work. The *cut-throat*, armed with a two-edged knife, seizes the fish by the eyes, cuts its throat, and having opened it down to the navel with a single stroke of his knife, passes it to the *header*. The header detaches the liver, which he throws into a barrel placed near him, and with the same hand tears out the entrails; after which, with his left hand, he cuts off the head of the fish. The *splitter* now seizes the fish by the left side of the neck, and opens it from the neck to the tail, cutting from left to right; after which he places it against a batten nailed on the table, and with a single stroke of his knife, if he can, he removes the back bone from the navel upwards. From the hands of the splitter the cod passes into those of the salter, who places it on a pile, spreading it carefully, with the flesh up, and the napes out, and, with a wooden shovel, scatters a layer of salt over each row. The salter's art lies in sprinkling on each fish just salt enough to make it keep well, but not enough to burn it.

The cod is left piled in this way for three days, or sometimes four, according to the quality of the salt, after which, the operation of washing commences. When cod is to be washed, it is conveyed in wheel-barrows, or hand-barrows, to a large trough filled with water, which is continually being changed; in this trough it is turned over and over by men armed with poles, and rubbed on both sides with the swabs on the ends of the poles, until all the salt is washed off, when it is put in piles again in order that the moisture may drain off from it. After some days, the piles are taken down, and the fish are spread one by one on bundles, three feet wide, covered with fir or spruce boughs, and supported upon posts about three feet from the ground, in order that by exposure to the action of the sun and air, they may be deprived of all the water they contain and be reduced to that dry state in which they may be preserved for several years in hot climates. If the process of dressing cod has to be performed with care, that of drying it, must not be neglected for a single moment; for cod is merchantable, or of inferior quality, or even sometimes entirely spoiled, according as the process is well or ill managed.

The hurdles on which cod are spread to dry, are called flakes. They are placed parallel to each other, with spaces of four feet between, to enable the men in charge of the fish to move round. At night the fish are gathered into piles of fifteen or twenty each, with the flesh side down, the largest on top by way of cover to the rest. In the morning, they are spread out, with the flesh up. If the sun gets too hot about the middle of the day, they are turned with the flesh down, to prevent their being burned, but as soon as the great heat is over, the flesh is again exposed to the drying influence of the sun. For, the faster cod is dried, the whiter and more transparent it is, and the dearer it sells in foreign markets.

When the cod is sufficiently dry, large round piles of it are made, containing as much as a ton and a half of fish each, and covered with birch bark and heavy stones. By the pressure of these, it is deprived of the little moisture that remained in it, and after remaining in this state for some weeks, it is put into dry stores where it is left until the time comes for sending it to the best markets. But, before it is shipped, it is spread out on ground covered with fine gravel during the warm hours of one day, to give it its last sunning or "parting sun," and extract from it any dampness it may have contracted in the store.

In fine weather, and during a dry season, when westerly winds predominate, cod is easily cured and made of the first quality. It is difficult when easterly and south-easterly winds prevail, and bring with them mists and rain that last for whole weeks. In ordinary seasons, from 5 to 6 per cent of the dried codfish is of second quality; in rainy seasons from 15 to 20 per cent is thus deteriorated.

This then is the mode of curing cod by exposure to the sun.

It is reported that attempts were made at St. Pierre Miquelon and in France to dry cod artificially by means of large ovens in which the fish were exposed to moderate and regular heat, but it is said that these experiments did not succeed as well as expected, and had to be abandoned.

The following patents in connection with the curing and drying of fish are on record in the Department of Agriculture, Ottawa:—

1874.—WM. SHARP, Portland, Me., U.S.—A method for preparing and preserving fish by smoking, and subsequently boiling and putting them in cans.

1878.—S. W. GRIFFIN, Chelsea, Mass., U.S.—A process for curing fish, consisting in salting the fish, removing the bones and skin from the flesh, and subsequently, without granulating it and working it in brine, subjecting the said flesh to compression in a press so as to expel the water and surplus brine from it, and reduce the mass to a cake or cakes.

1878.—D. H. TETU, Quebec.—A method of drying fish by the employment of a vertical spindle frame, having a horizontal table, or tables, on which the fish are placed and rapidly rotated, to induce a current of air, whereby drying is facilitated.

1886.—W. BALDER & G. H. WEBSTER, Chicago, U.S.—An apparatus for preserving fish, &c.

1887.—J. SANGSTON & W. RODDEN, Montreal.—An apparatus for the preservation of fresh fish.

1888.—C. THOMPSON, Halifax.—Art or process of preserving both salt and smoked cooked fish.

1889.—S. MARMONT, Christiana, Norway.—Process of, and means for curing and preserving all kinds of fish, &c.

1892.—C. THOMPSON, Halifax.—Mode of drying fish.

1893.—J. S. WHITMAN, Annapolis, N.S.—Process of drying and curing fish.

THE THOMPSON METHOD OF DRYING FISH ARTIFICIALLY.

In 1890, Mr. Cathcart Thompson, of Halifax, brought to the notice of the department, a process of his invention, by which he claimed that fish could be dried by means of absorbent pads for merchantable purposes; thereby obviating the delays and dangers of the present method. This process is thus described by the inventor:—

A layer of green-salted fish is spread evenly on an absorbing pad; common gunning cloth makes a good, cheap and effective one. Another pad is laid over this succeeded by another layer of fish, followed again by a pad, and so on successively until the whole quantity of fish is spread; a pad being placed over the last layer. A platform of boards is then laid on this, and weights or other appliances are used to cause a slight, continuous and uniform pressure. The pile is allowed to remain from 24 to 48 hours, during which time the pads become saturated with moisture, which they have extracted from the fish. Re-piling then takes place; dry pads being substituted for the wet ones; the latter being dried for further use. Re-piling with the substitution of dry pads is continued till the fish have become sufficiently dry; a week or ten days being long enough to effect this object if intended for the home or West India market. If intended for more distant markets, which we have at present, a somewhat longer period would be required, with a certainty that each fish will be merchantable; *i.e.*, neither sun-burnt, shiny or broken. Re-piling need only be done when convenient; the delay of a day or two will in no wise injure the fish. By this method, fish can be used at any season of the year, if protected against frost. Thousands of quintals of fish are now lying on our shores, which must remain until next May, before they can be got ready for market, unless they are cured in this way.

The inventor further claimed that the advantages of his process were self-evident to any person acquainted with the method adopted by our fishermen, and the difficulties encountered and the losses sustained during the drying of their catch in our variable climate. The annual yield of dried cod, haddock, etc., in Canada, is over 1,000,000 quintals. According to the opinion of thoroughly competent judges in such matters, it is estimated that at least one-tenth of this yield is injured to the extent of half its value by sunburn, shine, etc., resulting from the effect of bad weather during the drying process. Valuing merchantable fish at \$3 per quintal, a low price, there is a yearly loss from this cause alone of \$150,000, and the saving in time,

labour, etc., by the use of the new method may be estimated to be at least \$100,000 more. Besides this great saving, a better class of fish can be produced, which will enable shipments to be made to more distant markets than can be supplied at present, thereby opening up new outlets for one of our principal articles of trade.

Mr. Thompson submitted a series of questions to large fish dealers and curers, asking their opinion with regard to the advantages of his invention. The answers, he claimed, conclusively showed the importance of the discovery and fully bore out his contention that the adoption of his process would result in an annual saving of no less than \$250,000 to the fishing industry. He specially laid great stress on the advantages which it would confer on the large quantity of late autumn and winter caught fish, which had to be held over to be prepared in the spring for want of suitable weather to cure them.

Lieut. Gordon, commanding the Fisheries Protection Service, gave it as his opinion that while Mr. Thompson's system of drying fish by means of artificial pads could certainly be of great value in the curing of late bank fish during the broken weather of the fall, he doubted whether the method would have the same value in the heat of summer, unless the temperature of the drying room was artificially lowered. The simplicity and the cheapness of the system were its virtues. He was shown some fish dried by this process which were certainly in good order. However, he had not seen any dry enough for the Brazil market, nor equal to the Gaspé hard shore fish. He recommended the granting of an appropriation of \$500 for the purpose of making practical experiments.

This recommendation was carried out, and a sum of \$500 was placed in the estimates for 1891-92, for the purpose of testing this new mode of drying fish.

In November, 1891, Mr. Johnston, agent of this department at Halifax, was instructed to place himself in communication with Mr. Thompson for the purpose of having the experiments carried out.

In April, 1892, Mr. H. W. Johnston sent the following report:—

“Authority was given to Mr. Thompson to make his experimental tests about the latter part of November, and he at once proceeded to procure the material and construct the necessary apparatus.

“Unfortunately the work has been very much delayed from Mr. Thompson having been laid up with a severe attack of influenza early in December, followed by relapses, which rendered him almost unfit for business during that and the two following months.

“The object was to ascertain by experiments on a sufficiently large scale, if the principle of abstracting moisture from fish by absorption could by an inexpensive process be of such practical utility to our fishermen, as to enable them to dry their fish independently of the weather to such an extent as would secure them until such time as an exposure to one day's sun would finish the drying and give them a good face.

“It was also proposed to ascertain if artificial heat could not be effectually used in the final drying and finishing.

“The experiments previously made by Mr. Thompson had been with small quantities at a time, and he thought it not unlikely that changes might be required in the practical working of the process when larger quantities had to be dealt with, and this has proved to be the case.

“The first trial was made with 200 pounds green salted codfish. They were placed in layers between pads made by inserting dry spagnum moss between sheets of cotton cloth and piled alternately one above another, pressure being applied upon the top of the pile. The moisture extracted was not nearly as great as was expected from previous experiments. It was found that the cause of this was that from the greater number of layers the fish did not become embedded in the pads sufficiently. The use of the pads was then done away with and the following method adopted. A portion of saw-dust was added to the moss, a number of light frames were made of two inch by one and a half inch lumber, six feet in length and three feet in width. One of these is laid upon the floor and a layer of dry moss and saw-dust is spread therein. This is covered with a sheet of cotton cloth large enough to envelop the

frame, a layer of fish is spread therein but inside the edge of the frame and face downwards, which is covered by another sheet of cotton. Another frame is placed immediately over the first one and the process continued till the whole of the fish is spread, or till a height of three or four feet is attained, a thicker layer of moss or saw-dust being placed over the last tier of fish. A platform of boards just sufficiently large to go inside the frame is laid over all. Weights, a lever or screw pressure is then applied to thoroughly embed the fish in the absorbent. The spreading of the moss and saw-dust over the layer of fish fills up the interstices between them and brings every part in contact with the absorbent and at the same time prevents the fish being pressed out of shape.

"Two lots of fish (Kench) of 600 pounds each have been subjected to this new method with the following results:—

"After four pilings between the absorbent, it being renewed each time, 30 and 33 per cent of the moisture was extracted, leaving $12\frac{1}{2}$ to 15 per cent to be taken out by the final exposure to the sun and air. The extraction of that percentage of moisture secures the fish from damage and they can be piled in store until such time as may be suitable to finish the process by exposure to the sun and air.

"Neither of these lots was fit to ship as samples, as they were badly handled when first caught, and split and much discoloured from the blood left in them at that time.

"On 23rd March, Mr. Thompson purchased from Messrs. Boak and Bennett, 300 lbs. of green codfish for experiment and the following is a detailed account of the result:—

"There were 97 fish in this lot, and after they had been cleaned, split and heads cut off, they weighed 200 pounds.

On the 25th March, they were placed under pressure as previously described. They were then taken out, weighed and replaced as follows:—

March 28, after 72 hours' pressure, weight....				170, loss 15	per cent.	
do	30	do	48	do	.... 155	do $7\frac{1}{2}$ do
April	2	do	72	do	.... 144	do $5\frac{1}{2}$ do
do	5	do	72	do	.... 134	do 5 do
do	7	do	48	do	.... 128	do 3 do

"The total hours pressure was 312 and the moisture extracted was 36 per cent.

"The weather was not favourable, being too cold.

"Warmer weather would no doubt have yielded quicker results.

"The periods under which the fish were allowed to remain under pressure, were in some instances longer than was necessary, owing in one case to the intervention of Sunday.

"The means by which the pressure was applied was not the best. A screw was used and of course as the moisture was extracted the fish shrank and the pressure was relaxed. A uniform pressure by means of a lever with weight would no doubt have been better.

"The fish during the several processes were subject to inspection by the department and also by practical fish merchants, and I append hereto a certificate which speaks for itself.

"I think the result so far establishes the fact, that, by Mr. Thompson's process, sufficient moisture can be extracted by simple and cheap means to secure the fish against damage at times when drying under the ordinary process would be impossible.

"The process could be employed with great advantage by fishermen at the place of catch, as the moisture could be removed from the fish continuously and quite independent of weather.

"They could then be placed in pile and the first fine day taken advantage of for the final drying.

"For the fish which have been the subject of Mr. Thompson's last experiment, six hours in the sun should suffice for the United States market and from one to two days to make them suitable for the Brazil market, where hard and very dry fish are required.

"Mr. Thompson proposes to continue his process in the same way with fish sufficient to turn out about five quintals. When this is done, the final test of sale in a foreign market can be made and a further report will be forwarded."

"We the undersigned, have examined green salted codfish, from which moisture has been extracted, under Mr. Cathcart Thompson's process of absorption. It is our opinion that the extraction of 30 per cent will secure the fish from damage until suitable weather offers for their final drying by exposure to sun and air, for the removal of the remaining 10 per cent to 15 per cent. This, we think, would not require more than from six hours to two days (good drying weather) according to the market for which they are intended.

"Dated at Halifax, 11th April, 1892.

"WILLIAM T. BENNET of BOAK & BENNET.

"FRANK J. PHELAN of JAS. F. PHELAN & SON.

"C. A. STAYNER of E. G. & C. STAYNER.

"L. HART of L. HART & SONS."

THE WHITMAN'S METHOD OF DRYING FISH ARTIFICIALLY.

Following on Mr. Thompson's steps: Mr. Thos. S. Whitman, of Annapolis, Nova Scotia, obtained on the 10th May, 1892, letters patent for an improved process of curing and drying fish. The advantages claimed are that by this process, fish can be cured much quicker than by the present system. Fish, as now prepared for exportation, occupies about three weeks in curing, and Mr. Whitman claims that by his process, the work can be done in about forty-eight hours. The exact quantity of moisture desired can also be retained in the fish, so as to suit the taste of customers.

The following is a description of Mr. Whitman's process:—

"The wet salted fish are taken from the kentch, and washed, after which surface water and pickle is pressed out of the fish by steam press or otherwise. After having been in press for a few hours, the fish are ready to be spread on the wire 'flakes' or trays that are placed in rows about nine inches apart; the rows of flakes or trays being contained in compartments that are traversed by pipes in which steam or hot water is permitted to circulate. The maximum temperature which the steam, or hot water, in the pipes can impart to the compartments is about 95° Fahrenheit.

"The fish having been spread upon the trays or flakes in the compartments are allowed to remain in a temperature of 90 to 95 degrees for a few hours, until they are thoroughly warmed, whereupon currents of cool dry air are forced over and under the fish on these flakes or trays. These currents of dry air come from channels or flues that open into the compartments. By opening and closing these cold dry-air flues at proper intervals, of say, two or three hours, thus alternately cooling and heating the fish, from one to two per centum of moisture per hour is taken from the fish. The products of evaporation are carried off from the compartments by flues running to a chimney, or suitable ventilators may be placed in the tops of the compartments, for carrying off the moisture to the roof of the building, or otherwise. It will be perceived that if the heating process were carried on by itself, the atmosphere surrounding the fish would soon be charged with moisture to such an extent as to prevent any further evaporations, and the fish too would be injured by being warmed for too long a time, or too thoroughly. The currents of fresh air which I alternate with the heating process described, serve to bring down the temperature

of the fish, and also to carry off the moisture-laden atmosphere which surrounds the fish, bringing into action fresh air which is ready to be charged with new moisture carried away from the fish by the next heating process.

"Although I prefer to carry on my improved process by the alternate heating of the fish and exposing the same to a current of fresh air, good results will also follow if the heating is carried on in the chambers at the same time that currents of fresh air are passed through said chambers."

"What I claim therefore is:

"1st. The process herein described of curing fish, which consists in exposing the fish to artificial heat and currents of fresh air, substantially, as specified.

"2nd. The process herein described of curing fish, which process consists in exposing said fish alternately to artificial heat and to currents of fresh cool air, substantially as specified.

(Sd.) THOMAS S. WHITMAN."

A correspondent writes as follows in the Yarmouth *Herald* of 18th July, 1893, respecting the success of Mr. Whitman's fish-drying apparatus:—

"Within the last few days I have had the privilege of visiting the extensive new fish-drying apparatus that has been put in operation in this city by the inventor, Mr. Thomas S. Whitman, of Annapolis. The building containing the apparatus and storage rooms has been constructed and completed, and operations have commenced within the last month. It is a very large building, 50 x 120, and is situated on Liverpool wharf, where there is ample wharfage and where a large amount of fish can be taken care of. Entering the building a very busy scene meets the eye; thousands of quintals of fish were to be seen in the various processes of washing, drying and packing for the largest fish markets in the world. I was particularly struck with the rapidity of the operation. Mr. Whitman buys all the green salted fish that offers; by his process they are dried perfectly in forty-eight hours, and are ready to ship in less than a week from kentch. It is certainly a new departure in the handling and curing of fish. The new system invented and introduced by Mr. Whitman is a perfect drier, and at the same time the fish are so kept apart from each other during the entire process of drying, that they are also kept cool, the atmosphere by which they are dried being of about the same temperature that is required in the natural system of drying. It is astonishing to note the vast quantities of fish that can be cured in a short time; several thousand quintals per week is the capacity of this large concern, and it is certainly a busy hive of industry, one of the busiest in the provinces.

"To-day your correspondent was shown about 8,000 quintals of fish that were being dried, and most of them were in the sea only a short time ago, and before the week closes they will be shipped in perfect order to the fish markets of the West Indies. Considering the large amount of foggy, wet weather that the people of the western counties generally have to meet during their fish-drying season, it would evidently be to the advantage of our largest fish packers if they were to adopt the methods now used and invented by Mr. Whitman, for it is evident that a vast amount of time is thus saved in the curing of fish, while the uniformity of the curing is maintained throughout, every fish appearing in perfect order as a result of this process. As I stated before, it only required forty-eight hours to thoroughly dry the fish, and they are then ready for shipment to any part of the world. No doubt your readers who are engaged in the fishery industry will seek an early opportunity of ascertaining from Mr. Whitman the cost of fitting up an establishment, and from what I have seen of the work done here, I have no doubt but that Yarmouth would be a splendid centre for this new and successful fish-drying apparatus."

As both the above systems of drying fish artificially appeared to be successful, the department caused inquiries to be made, through its officers, for the purpose of ascertaining where, and to what extent, and with what results these experiments had been carried out.

The following information on this subject has been received from Mr. Whitman:—

“HALIFAX, N.S., November 28th, 1893.

“The Department of Marine and Fisheries,
Halifax, N.S.

“DEAR SIRS,—At your request I send the enclosed estimate of business done by our patent process this season. We are now carrying on a general fish business, drying green and out of condition fish, either on our own account or for others. At this season of the year we make a specialty of putting half dried fish in condition, such that otherwise would have to be held till spring. We are now negotiating for a large quantity of half dried fish at St. John's, Newfoundland, at which place from one to two hundred thousand pounds of soft fish are annually held over. Our great difficulty at Halifax is the poor quality of fish offered owing to not being properly dressed and washed, on which account several cargoes had to be rejected. We have successfully put through a cargo of French fish, in bond, under permission from your department, and are now drying samples for St. Pierre parties which will probably result in business.

“The inclosed statement only includes fish dried on our own account, besides which we have dried a considerable quantity for outside parties.

“Yours very truly,

“A. HANFIELD WHITMAN.”

HALIFAX FISH DRIER.

“The drier commenced operations the first week in July, and handled the following amount of fish up to November 24th, 1893:—

2,000,000 pounds of green fish bought at average price of \$2 per 100 pounds.....	\$ 40,000	
Cash paid, labour, drying and shipping.....	5,000	
Cash paid, cooperage.....	2,500	
Cash paid, truckage, wharfage and salt.....	2,000	
Amount to cover insurance, rent, interest and profit.....	4,500	
Export and in store, 13,500 qtls. dry fish at an average value of \$4 per qtl.....		\$ 54,000
	<u>\$ 54,000</u>	<u>\$ 54,000</u>

HALF DRIED FISH.

1,200 qtls Newfoundland fish at \$4	\$ 4,800 00	
400 qtls. French fish dried, in bond, under permission from department, \$800.....	5,600 00	
Expense drying, 15 cents per qtl.....	240 00	
Dried weight of the Newfoundland lot, 1,165 qtls., loss, 35 qtls. at \$4.....	140 00	
Dried weight French fish, 340 qtls., loss in weight 60 qtls. at \$2.....	120 00	
Amount to cover incidental expenses and profit.....	422 50	
Exported and in store, 1,165 qtls. dry fish at \$4.50 per qtl.....		\$5,247 50
340 qtls. dry fish at \$3.75 per qtl.....		1,275 00
	<u>\$ 6,522 50</u>	<u>\$6,522 50</u>

“The above figures are estimated as near actual value as possible.”

Signed, A. H. WHITMAN.

OPERATIONS.

(*Extract from a Letter from Thos. S. Whitman.*)

"There are now two fish drying establishments being worked under my patent process.

"A Company (Joint Stock) has been formed at St. Johns, Newfoundland, to operate my process of fish drying at that Port. Negotiations are now pending with fish dealers at Lunenburg, Yarmouth, N. S., Paspebiac, Gaspé, in Quebec, for fish driers by my process.

"At Annapolis, N. S., 1892.—Four buildings were erected in the summer of 1892. One 40 by 80 with a wing 30 by 50; both two stories. A kench house for storing green fish, 25 by 120, and a salt store 25 by 30. On the upper floors of the larger buildings are placed drying compartments, with a spreading surface for fish equal to 250 quintals.

"At this establishment, in the season of 1892-93, there was purchased from fishing vessels, bay, grand bank, and shore boats, 1,345,913 lbs. green codfish; 240,000 lbs. green haddock; 374,000 lbs. green hake and pollock; for which there was paid on delivery in cash, \$39,960.00. These fish were all dried thoroughly and prepared for market during the winter months of 1892-93.

"At this Annapolis fish drier, there has already been purchased in 1893, 1,236,606 lbs. of green fish, at a cost of over \$15,000.00 in cash paid to the fishermen; and the drying is now being done at this date.

"At Halifax, the second fish drying establishment under my patent process has been put in operation at Liverpool wharf, Halifax City. Buildings have been erected the past summer for this purpose, one 50 by 120 feet, three stories; one 30 by 70 feet, three stories. On the third floor of the larger building is placed a fish drying apparatus of my process, of a capacity to spread at one time (in a closed compartment, 30 by 90 by 7 feet) about 500 quintals of green fish. This compartment is heated by about 30,000 lineal feet of inch wrought iron pipe, under hot water system; and the current of air forced by two 90 inch exhaust fans. These fans (as well as the elevators from first to third floors, has a powerful force pump for supplying sea water to the wash room on the first floor) are all worked by a 20 H. P. steam engine. On the second floor is a storage and packing room, fitted with an hydraulic press, used for packing in place of a screw.

"In Halifax our drying operations only commenced on the 1st of July, 1893, and up to the 1st December, five months, there has been 2,000,000 lbs. of green codfish, hake and haddock, thoroughly dried in this establishment. The most of these fish have been already exported, and with what remains now in store has turned out 13,500 quintals of hard dried fish. Many of these fish were purchased early in the season from the first arrivals of bay and bank fishing craft, at prices for the green fish 30 to 35 per cent over prices now current. Notwithstanding this, the average cost of our five months work for hard dried fish (\$4 per quintal) is still under the value in the Halifax market.

"For these 2,000,000 lbs. of green fish we paid in cash over \$40,000.00, or about 2c. per pound for green codfish, while the present market price is 1½c. per pound.

"In addition to drying green fish in the time named, we have thoroughly dried about 2,000 quintals of half dried fish, including some lots of fish dried for the Halifax fish merchants.

"A joint stock company has been formed at St. John's, Newfoundland, for the purpose of operating one of my fish driers in that city; and more particularly fish that are received from the outports and Labrador, in a partially sun-dried condition.

"I am now negotiating with firms in the fish trade at Lunenburg and Yarmouth, N. S., as well as at Paspebiac, Gaspé, Quebec and St. Pierre Miquelon, for the erection of fish driers by my process."

Inspector Hoekin writes, under date 2nd December, 1893, that when in Halifax, he endeavoured to ascertain how matters stood regarding the Thompson process of artificial drying of fish, and was informed by reliable persons, that no progress had been made with it.

On the other hand, what is known as the Whitman process is being pushed forward. Mr. Hockin visited a large establishment in Halifax, and saw a large quantity of fish being operated upon. He was further informed that so far as the curing of the fish is concerned, there was no doubt about the success of the process, and that the only question to be solved was whether the venture would give an adequate return for the outlay. It affords a ready means to cure fish taken at seasons and during weather in which they could not otherwise be saved. Mr. Whitman has two establishments working under his patent process: one in Halifax, having a capacity of about 1,200 quintals of dry fish per week, and one at Annapolis, of a capacity of about 600 quintals.

THE FISHERIES OF THE GREAT LAKES.

A COMMISSION OF INQUIRY INTO THE FISHERIES.

A Government International Commission, and the Commission, issued this year, show that there is an expression of alarm respecting the diminution of the finer grades of fish in the waters of Ontario. The Canadian fishermen are heard at times to complain of the severity of restrictions, or proposed restrictions upon their operations. It may be interesting to set forth some of the facts relating to the questions which are of such importance. Indeed, when the facts are examined many of the fishermen will, it is hoped, be ready to co-operate with the Department of Marine and Fisheries.

The fisheries of the great lakes of Ontario are the most extensive lake fisheries of the world. In these waters are found the whitefish, salmon-trout, herring, sturgeon, bass, pickerel, &c. An extensive and lucrative trade has sprung up in the business of catching, buying, freezing and preparing these fish for sale through the Dominion, and for export to the United States. Fishing tugs, sail boats, storehouses and freezers are required. This industry, therefore, gives employment to a large number of men during a portion of the year. Other industries, such as ice-harvesting, tug and boat building; the making of nets, &c., &c., are more or less dependent on the prosecution and perpetuation of these fisheries.

VALUE OF THE GREAT LAKES FISHERIES.

To demonstrate the productiveness of these waters and the developments of the fisheries, the following tables have been prepared.

The latest statistics published in the annual reports of this department, show that 77 steam tugs, and schooners, and 1,032 sail boats, manned by 2,700 men, were employed on the Great Lakes during the season of 1892. There were over one million fathoms of gill-nets and seines used, and 368 pound-nets; the whole representing an invested capital of over \$700,000. This amount does not, however, include the value of freezers, ice houses, fish cars, piers, wharfs, &c. The value of fish caught amounted to nearly \$2,000,000.

The table below gives the total yield of fish taken during the past ten years. The quantity of fish taken in these waters during that period amounts to 239,470, 174 pounds, valued at \$14,258,510; the principal kinds of fish caught being:—

Herring	81,000,000 pounds
Whitefish	52,000,000 "
Salmon-trout.	50,000,000 "

STATEMENT showing the Total Quantity of Fish caught in the four Great Lakes of Ontario during the last ten Years, from 1883 to 1892 inclusive.

Years.	Lakes.	Whitefish.	S. Trout.	Herring.	Pickered.	Sturgeon.	Bass.	Other fish.	Total Quantity.	Total Value.
Total for the last 10 years, 1883 to 1892.	Superior.....	Lbs. 7,867,915	Lbs. 8,023,605	Lbs.	Lbs. 798,083	Lbs. 551,387	Lbs.	Lbs. 753,786	Lbs. 18,594,776	\$ 1,379,046
	Huron.....	39,696,773	39,991,964	11,758,896	6,740,701	4,211,635	512,777	6,906,520	109,909,266	7,768,728
	Erie.....	2,672,355	.....	50,521,884	7,528,139	4,169,150	901,796	7,599,444	73,392,768	3,311,816
	Ontario.....	2,523,809	1,933,514	18,743,921	1,222,356	.....	1,668,681	11,481,083	37,573,364	1,798,920
	Total.. .. .	52,760,852	50,549,083	81,024,701	16,289,279	8,932,172	3,083,254	26,830,833	239,470,174	14,258,510

STATEMENTS showing the Capital invested in Fishing Materials, the Number of Fishermen and the Quantities of Fish taken in

LAKE SUPERIOR.

Years.	Number of Fishermen	Tugs and Vessels.		Boats.		Pound-nets.		Gill-nets.		Total Value.
		No.	Value.	No.	Value.	No.	Value.	Fathoms.	Value.	
			\$		\$		\$		\$	\$
1883.....	*	*	*	*	*	8	3,400	232,787	13,880	
1884.....	167	1	1,000	57	7,525	1	400	194,832	8,993	17,918
1885.....	214	4	6,500	90	8,235	5	1,850	157,624	19,696	36,281
1886.....	270	6	8,800	120	10,270	9	3,300	41,860	24,790	47,160
1887.....	234	6	7,000	102	10,860	15	5,550	62,300	18,904	42,314
1888.....	189	7	11,800	78	8,870	15	5,610	189,075	18,075	44,355
1889.....	149	5	10,650	55	9,110	14	4,650	171,300	14,865	39,275
1890.....	119	6	9,200	42	5,160	15	5,340	94,612	9,085	28,785
1891.....	174	8	15,500	74	7,025	74	14,800	62,500	11,550	48,875
1892.....	200	9	20,960	64	8,900	48	10,400	72,100	15,900	56,160

* Not published for that year.

LAKE SUPERIOR—Continued.

Years.	Whitefish.	Salmon-trout.	Sturgeon.	Pickereel.	Other fish.	Total Value.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
1883.....	635,800	904,397	30,000	68,000	210,000	116,533
1884.....	564,950	645,500	400	10,800	2,000	77,790
1885.....	606,160	911,574	41,500	83,000	.....	111,871
1886.....	847,160	842,154	41,480	152,988	77,625	134,033
1887.....	657,160	503,000	120,960	69,100	67,261	116,680
1888.....	932,180	971,280	54,518	90,219	60,000	159,238
1889.....	896,000	1,020,500	71,329	117,940	77,000	173,846
1890.....	978,400	692,200	97,400	90,000	81,300	150,713
1891.....	966,465	1,077,300	43,960	71,536	113,000	177,681
1892.....	783,640	1,055,700	49,840	44,500	65,600	160,661
Totals.....	7,867,915	8,623,605	551,387	798,083	753,786	1,379,046

STATEMENTS showing the Capital invested in Fishing Material, the Number of Fishermen and the quantities of fish caught in

LAKE HURON, INCLUDING GEORGIAN BAY.

Years.	Number of Fishermen.	Tugs and Vessels.		Boats.		Pound-nets.		Seines.		Gill-nets.		Other Fishing Gear.	Total Value.
		No.	Value.	No.	Value.	No.	Value.	Fath.	Value.	Fathoms.	Value.	Value.	
			\$		\$		\$		\$		\$	\$	
1883	*	*	*	*	*	53	23,869	.....	.....	627,456	91,829	60	.....
1884	1,234	20	71,500	402	34,403	92	39,150	3,700	3,455	599,238	92,000	200	240,808
1885	1,075	15	53,800	339	48,694	70	30,900	4,500	5,770	441,482	55,900	....	195,064
1886	981	19	44,050	299	53,310	49	20,500	5,264	4,685	685,465	75,897	375	198,817
1887	990	18	64,700	322	44,530	67	30,305	5,014	10,345	1,089,489	108,165	.....	258,045
1888	1,169	33	95,600	352	48,456	86	28,250	13,088	8,910	534,290	156,856	160	338,132
1889	1,139	32	86,600	343	47,744	55	20,580	4,563	9,733	933,035	149,407	437	314,501
1890	1,190	38	78,100	387	60,550	66	18,000	4,879	10,110	1,093,800	186,605	...	353,365
1891	1,249	30	62,700	398	66,975	100	28,240	2,986	3,275	1,183,650	183,830	.....	345,020
1892	1,142	32	92,400	365	62,435	106	28,600	7,390	5,080	776,227	221,320	.....	409,835

* Not published for that year.

LAKE HURON—Continued.

Years.	Whitefish.	Salmon-trout.	Herring.	Pickerele.	Sturgeon.	Bass.	Other fish.	Total Value
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$
1883...	2,288,392	3,328,625	871,800	790,439	177,200	13,800	1,205,700	536,867
1884...	2,342,694	4,082,814	1,408,200	794,434	372,041	7,800	713,100	624,746
1885...	2,654,260	3,979,990	1,570,000	600,342	825,800	10,500	653,900	627,398
1886...	2,380,849	3,317,896	801,000	490,747	831,775	44,317	555,068	560,565
1887...	2,990,006	3,230,595	1,420,800	280,443	373,878	34,900	517,216	628,404
1888...	5,183,338	3,607,288	1,141,300	609,501	450,754	90,000	388,309	825,691
1889...	5,213,478	3,809,247	955,900	757,008	271,417	128,500	408,729	867,837
1890...	5,930,820	4,906,890	1,425,100	817,250	350,800	123,200	493,100	1,047,725
1891...	4,504,780	4,635,360	956,640	686,400	328,220	24,710	1,021,618	915,610
1892...	6,208,156	5,093,259	1,208,156	914,137	229,750	35,050	1,039,780	1,133,885
Totals..	39,696,773	39,991,964	11,758,896	6,740,701	4,211,635	512,777	6,996,520	7,768,728

STATEMENTS showing the Capital invested in Fishing Material, the Number of Fishermen and the quantities of fish caught in

LAKE ERIE.

Years.	Number of Fishermen.	Tugs and Vessels.		Boats.		Pound-nets.		Seines.		Gill-nets.		Other Fishing Gear.	Total Value.
		No.	Value.	No.	Value.	No.	Value.	Fath.	Value.	Fathoms.	Value.	Value.	
			\$		\$		\$		\$		\$	\$	\$
1883	*	*	*	*	*	101	23,840	.....	2,045	.....	.....	66	.....
1884	303	3	3,200	150	8,600	112	29,215	3,100	3,608	4,287	405	78	45,106
1885	346	.....	.....	185	50,296	132	37,965	3,800	3,330	16,761	2,028	2,205	95,824
1886	337	11	14,555	163	18,666	126	38,475	1,863	2,280	16,838	2,338	70	76,384
1887	363	9	12,430	153	15,673	143	48,695	2,882	4,030	9,322	1,330	50	82,208
1888	460	12	18,400	207	16,391	194	60,602	3,848	3,515	13,055	1,762	60	100,730
1889	465	15	22,600	233	18,520	195	65,575	5,933	3,953	8,392	1,950	160	112,758
1890	526	12	16,700	264	18,775	197	56,810	6,675	4,275	24,600	12,349	.....	108,909
1891	497	16	39,250	272	18,928	206	55,110	5,427	2,875	27,610	6,285	.....	122,338
1892	515	23	62,800	245	22,397	210	73,100	7,840	4,775	22,350	5,090	.....	168,162

* Not published for that year.

LAKE ERIE—Continued.

Years.	Whitefish.	Herring.	Pickarel.	Bass.	Sturgeon.	Other fish.	Total value.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$
1883.	221,628	2,212,200	188,414	111,440	222,530	762,000	118,428
1884.	227,803	2,751,000	174,597	54,260	316,020	699,680	137,899
1885.	186,080	5,935,400	685,102	110,427	459,265	278,453	242,774
1886.	141,643	3,421,639	827,659	38,000	349,854	331,150	262,357
1887.	333,006	6,302,816	930,984	98,839	609,609	493,590	431,433
1888.	389,836	5,934,176	469,581	91,819	469,581	578,270	446,304
1889.	306,213	6,902,563	901,677	109,966	411,741	993,593	487,604
1890.	204,322	5,393,000	961,350	134,650	580,610	1,149,960	422,464
1891.	349,874	5,542,810	894,660	96,935	387,630	1,037,948	354,647
1892.	311,950	6,126,280	1,494,115	55,460	362,310	1,274,800	407,906
Totals...	2,672,355	50,521,884	7,528,139	901,796	4,169,150	7,599,444	3,311,816

STATEMENT showing the Capital invested in Fishing Material, the Number of Fishermen and the quantities of fish caught in

LAKE ONTARIO.

Years.	Number of Fishermen.	Tugs and Vessels.		Boats.		Pound-nets.		Seines.		Gill-nets.		Other Fishing Gear.	Total Value of Fishing Material.
		No.	Value.	No.	Value.	No.	Value.	Fath.	Value.	Fathoms.	Value.	Value.	
			\$		\$		\$		\$		\$	\$	\$
1883	*	*	*	*	*	2	900	.....	7,655	104,926	13,113	800	.....
1884	480	4	2,400	204	8,945	2	270	10,800	6,874	133,397	14,316	3,100	35,905
1885	480	3	3,000	190	10,009	2	250	8,350	4,974	108,500	16,993	1,110	36,336
1886	462	5	4,300	308	10,928	3	450	6,733	5,454	111,325	16,844	2,225	40,201
1887	459	4	8,300	209	17,774	.....	.....	5,100	9,505	110,450	14,980	2,220	52,779
1888	580	4	8,300	225	9,528	.....	.....	7,440	5,615	136,900	14,380	3,640	41,463
1889	604	6	11,550	231	11,140	.....	.....	7,940	6,055	167,734	23,721	3,604	56,070
1890	565	4	9,200	220	10,810	3	450	7,050	5,457	137,500	19,450	2,570	47,937
1891	528	4	8,500	220	11,817	3	600	15,512	4,865	115,026	20,150	4,985	50,917
1892	586	10	11,020	270	30,755	3	375	4,765	4,845	144,355	19,190	4,936	71,121

* Not published for that year.

LAKE ONTARIO—Continued.

Years.	Whitefish.	Salmon-trout.	Herring.	Maskinongé.	Bass.	Pickereel.	Other Fish.	Total Value.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$
1883....	96,300	296,000	491,400	190,000	205,800	145,400	848,000	125,129
1884....	176,400	367,580	1,448,800	135,550	202,962	128,050	1,131,025	145,307
1885....	256,800	289,340	1,503,800	178,900	220,920	206,200	1,287,555	162,081
1886....	166,149	218,766	1,106,615	236,215	149,350	70,810	586,808	133,451
1887....	193,234	103,475	1,485,826	132,760	148,890	111,274	1,090,805	154,128
1888....	270,050	84,545	2,993,662	256,025	163,710	104,270	791,818	240,913
1889....	269,396	110,548	2,965,608	237,510	93,584	98,352	742,626	226,625
1890....	246,850	100,760	2,480,900	195,956	131,745	83,200	865,870	203,971
1891....	368,030	165,350	2,265,500	199,870	155,600	70,000	1,136,695	198,277
1892....	480,600	197,150	2,001,810	121,500	196,120	204,800	1,115,695	209,038
Totals..	2,523,809	1,933,514	18,743,921	1,884,286	1,668,681	1,222,356	9,596,797	1,798,920

LAKE SUPERIOR.

Lake Superior is 390 miles long by 160 miles wide, with an area of 31,420 square miles. Fishing is chiefly carried on with gill-nets and pound-nets. No seines are used. There are 9 steam tugs and 70 sail boats employed fishing on this lake.

The yield of the fisheries, for the past ten years, is given at 18,594,000 pounds, valued at \$1,379,046, chiefly consisting of salmon-trout and whitefish. In 1883, the whitefish fishery yielded 630,000 pounds, and in 1891, 960,000 pounds. The only other kinds of fish reported from this lake, are sturgeon and pickerel, which show considerable fluctuations.

LAKE HURON.

Lake Huron, including Georgian Bay, is 400 miles long by 160 wide, covering an area of 24,000 square miles. Its fisheries employ about 1,150 men, using 32 tugs and 365 sail boats. Pound-nets are used in Lake Huron proper, and in the north channel, but not in Georgian Bay, where they have been forbidden since 1884. Gill-net fishing only is permitted in Georgian Bay. The number of pound-nets has doubled during the past ten years, being now 106.

The total value of fish caught in Lake Huron during the past ten years aggregates more than the whole product of all the other great lakes put together. The staple kinds of fish are whitefish and salmon-trout, which yield about 40,000,000 pounds each; herring, 11,750,000 pounds; pickerel, 6,750,000 pounds; sturgeon, 4,000,000 pounds; bass, pike, and other fish, yielding an aggregate of 110,000,000 pounds since 1883.

The total yield of last year indicates a value, more than 100 per cent over the year 1883. During the past six years the yield of whitefish has trebled; that of salmon-trout nearly doubled; while the catch of herring and pickerel has considerably increased.

LAKE ERIE.

Lake Erie is 250 miles long by 60 miles wide, and covers an area of 10,000 square miles. The principal kinds of fish taken in these waters are herring, pickerel, sturgeon, whitefish, bass, &c., yielding an aggregate of 73,000,000 pounds during the past ten years, valued at \$3,300,000. Herring is now the staple fish of these waters; its catch exceeds that of all the other kinds of fish put together, and has trebled during the past ten years. The most noticeable fluctuation occurs in pickerel, which yielded only 188,000 pounds in 1883, and 1,494,000 pounds in 1892; an increase of over 600 per cent. Whitefish and sturgeon show an improvement during the past ten years. During the last six years, the catch of whitefish did not vary much. Although the catch of sturgeon for 1892, shows better than for 1883, it has often been exceeded during that period; especially in 1887, when the catch was double that of last year.

The fishing fleet on Lake Erie consists of 20 steam tugs and vessels, and 245 sail boats, manned by about 500 fishermen, using about 200 pound-nets. Ten years ago, there were only about 300 persons employed fishing 100 pound-nets, an increase of one hundred per cent.

LAKE ONTARIO.

Lake Ontario is 190 miles long by 52 wide, and covers an area of 7,330 square miles. The total value has increased nearly 70 per cent. Herring is now the most abundant fish in these waters; over 2,000,000 pounds having been caught every year, during the past five years the catch of whitefish has increased over 400 per cent since 1883. Salmon-trout, seems to be on the decline, and although the catch for 1892 was as good, if not better than that of the past five years, it fell far short of

that of ten years ago, by about 33 per cent. The other kinds of fish caught in these waters are pickerel, bass and maskinongé. During the ten years past the aggregate yield of the fisheries was 35,500,000 pounds, valued at \$1,798,000.

Fishing is carried on with gill-nets and seines only; about 145,000 fathoms of gill-nets, and 5,000 fathoms of seines being used. There are about 250 sail boats and ten tugs or vessels employed in the fisheries; the whole giving employment to about 500 fishermen. No pound-nets are allowed in Lake Ontario.

RELATIVE POSITION OF THE CANADIAN AND UNITED STATES FISHERMEN ON THE
GREAT LAKES OF ONTARIO.

In the annual report of this department for the year 1891, reference is made to the fact that in view of the restrictions placed by the Canadian Government upon the times and modes of fishing, our fishermen are placed at a certain disadvantage as compared with those of the States. The necessity of these restrictions, however, is there pointed out. The regulation now in force on our Great Lakes prohibits fishing for salmon-trout and whitefish during the month of November; this period being known to be that during which the above fish are engaged in the important act of reproducing their species.

In order to meet the pressing demands of the fishermen, this prohibition was relaxed during the fall of 1893, so as to admit of herrings only being caught in pound-nets, on such grounds as were known not to be frequented by whitefish or salmon-trout. There is no restriction on the mesh of pound-nets, although experience shows that such a measure is necessary to prevent the destruction of young and immature fishes.

The idea that in such extensive bodies of waters, as Lake Superior for instance, the local range of various kinds of non-migratory fishes extends across the water boundary is not borne out.

On the Canadian side of Lake Erie, the number of pound-nets and their distance apart, is regulated in such a manner as not to unduly interfere with each other, and injure the fishermen as well as the fisheries. On the United States side, a different state of affairs prevails. There is no license system there; any one who so desires, may fish; and the consequence is that especially at the head of Lake Erie, pound-nets are crowded one on top of the other, to such an extent that besides seriously interfering with navigation, they are actually driving the fish away from the shore. It is not assumed that Canadian fishermen would advocate free fishing of this kind.

During the course of an investigation into the fisheries adjoining international waters, by Mr. Rathbun, of the United States Fish Commission, and Dr. Wakeham, the other commissioner appointed by Her Majesty's Government, it was ascertained that the fish which visit our side to spawn do not all move to United States waters, but are local in their habits, rather than migratory, and that while it would be better for the fisheries of Lake Erie if the United States would co-operate with Canada, in the protection of fish, the Canadian fisheries of Lake Erie are now greatly benefited by the protection afforded by Canada alone. It is for this reason that while the catch of whitefish on Lake Erie has undoubtedly decreased during recent years, the waters on the Canadian side are better stocked than those of the United States. The fisheries on the Canadian side are not depleted to anything like the same extent as they are on the United States side, and the cost to the fishermen of taking the same quantity of fish is less. It is therefore evident that the restrictions imposed by the Government have prevented our fisheries from becoming exhausted. The same conclusions have been reached by the Fishery Commission appointed by the Canadian Government to make special enquiry into the condition of the lake and river fisheries of Ontario generally.

Alarm exists respecting the decrease of the finer grades of fish in the great lakes.

COMPARATIVE STATEMENT OF THE YIELD AND VALUE OF THE FISHERIES IN THE
CANADIAN AND UNITED STATES WATERS OF THE GREAT LAKES.

In the annual report of this department for the year 1891, comparative tables were published showing the variations in the yield and value of the fisheries on both sides of the great lakes. This was done for the purpose of establishing whether the contentions of certain Canadian fishermen that there was an enormous difference in favour of the United States, were founded on facts or not. These tables comprised the years 1880 and 1885. A recent census bulletin, published by the United States Department of the Interior, affords an opportunity of extending these tables by comparing the returns for the years 1885 and 1889, and drawing the conclusions therefrom:—

COMPARATIVE TABLE showing the Yield and Value of Fish caught on both

Lakes.	Whitefish.		Trout.		Herring.	
	1885.	1889.	1885.	1889.	1885.	1889.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Superior.....	606,160 *4,571,947	896,000 *3,898,558	911,574 *3,488,177	1,020,500 *3,366,724	324,000 *382,123	
†Huron and St. Clair. . .	2,711,060 *1,466,505	5,343,348 *2,556,804	4,087,290 *2,539,780	3,899,047 *2,181,346	4,414,200 *2,473,800	1,610,440 *4,659,221
Erie.....	186,080 *3,531,855	306,213 *3,323,772	106,900 *66,703	5,935,400 *19,354,900	6,902,563 *37,200,850	
Ontario.....	256,800 *90,711	269,396 *23,383	298,340 *20,510	110,548 *6,500	1,503,800 *403,585	2,965,600 *1,850,140
Totals.....	3,760,100 *9,661,018	6,814,957 *9,802,517	5,288,204 *6,155,367	5,030,095 *5,621,273	11,853,400 *22,556,285	11,478,503 *44,092,334

*Figures represent United States side.

†Huron includes Georgian Bay and St. Clair to mouth of Detroit River.

COMPARATIVE TABLE showing the Number and Value of Fishing Vessels and Lakes for the Years

Lakes.	Fishermen.		Tugs and Vessels.			
	†Number.		Number.		Value.	
	1885.	1889.	1885.	1889.	1885.	1889.
					\$	\$
Superior.....	214 *914	149 *780	4 *15	5 *9	6,500 *68,100	10,650 *27,350
†Huron and St. Clair.....	1,375 *1,164	1,507 *1,444	16 *2	33 *12	55,800 *42,450	88,100 *30,000
Erie.....	346 *4,298	465 *2,181	15 *53	15 *42	178,200 *178,200	22,600 *143,000
Ontario.....	480 *600	604 *398	3 *2	6	3,000 *4,800	11,550
Totals.....	†2,415 *6,976	2,725 *4,803	23 *82	59 *63	65,300 *293,550	132,900 *200,350

*Figures represent United States side.

†Huron includes Georgian Bay, and St. Clair to mouth of Detroit River.

†Fishermen in the United States include the shoremen, while in Ontario they comprise only those engaged fishing.

sides of (Canada and United States), the Great Lakes, for the Years 1885 and 1889.

Sturgeon.		Pickerel and Pike.		All other fish.		Total Value.	
1885. *	1889.	1885.	1889.	1885.	1889.	1885.	1889.
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$	\$
41,500	71,329	83,000	117,940	.....	77,000	111,871	173,846
*182,760	*84,469	.....	*122,055	*258,216	*30,020	*291,523	*280,807
875,870	315,157	710,942	1,010,727	843,400	693,601	725,803	928,387
*443,280	*656,369	.....	*2,724,583	*6,719,600	*4,161,074	*316,590	*427,252
459,265	411,741	702,802	1,030,729	371,180	974,508	242,774	487,604
*4,727,950	*1,244,607	.....	*14,583,471	*23,734,912	*7,143,929	*1,109,096	*1,033,758
50,050	50,400	431,130	254,394	1,412,390	867,278	162,081	226,625
*386,974	*200,927	.....	*184,254	*1,496,686	*424,742	*95,869	*85,431
1,426,685	848,627	1,927,874	2,413,790	2,626,970	2,612,387	1,242,529	1,816,462
*5,740,964	*2,186,372	.....	*17,614,363	*32,209,414	*11,759,765	*1,813,078	*1,827,248

Boats, Nets, &c., and the Number of Fishermen on both sides of the Great 1885 and 1889.

Boats.				Pound-nets.				Gill-nets.		Seines.	
Number.		Value.		Number.		Value.		Value.		Value.	
1885.	1889.	1885.	1889.	1885.	1889.	1885.	1889.	1885.	1889.	1885.	1889.
		\$	\$			\$	\$	\$	\$	\$	\$
90	55	8,235	9,110	5	14	1,850	4,650	19,696	14,865		
*504	*454	*32,635	*29,631	*230	*210	*67,520	*36,810	*7,557	*72,624	*2,920	*3,094
397	433	50,581	49,991	74	55	31,700	20,580	55,900	149,407	10,983	15,493
*764	*623	*87,953	*33,334	*643	*755	*125,900	*123,818	*35,493	*43,116	*8,825	*4,691
185	233	50,296	18,520	132	195	37,965	65,575	2,028	1,950	3,330	3,953
*1,483	*1,063	*120,557	*127,556	*928	*1,838	*252,285	*483,920	*75,507	*94,978	*8,320	*2,150
190	231	10,009	11,140	2	.....	250	.....	16,993	23,721	4,974	6,055
*465	*253	*15,648	*13,232	*14	*172	*6,975	*8,225	*23,952	*13,337	*3,177	*665
862	952	119,121	88,761	213	264	71,765	90,805	94,617	189,943	19,287	25,501
*3,216	*2,393	*206,793	*203,753	*1,815	*2,975	*455,680	*652,773	*213,034	*224,055	*23,242	*10,600

A glance at the above tables shows that while the total yield of the fisheries on the Canadian side of the Great Lakes, during the year 1889, exceeds that of 1885 by over half a million dollars; the fisheries on the United States side remained almost stationary. The actual ratio of increase or decrease on each side was as follows:—

Canadian Side.

Lake Superior, increase.....	55 per cent.
Huron and St. Clair, increase.....	27 do
Erie, increase.....	100 do
Ontario, increase.....	40 do

United States' Side.

Lake Superior, decrease..	3 per cent.
Huron and St. Clair, increase.....	34 do
Erie, decrease.....	6 do
Ontario, decrease.....	10 do

Taking the five lakes together; the Canadian side shows best with regard to the yield of whitefish; the catch having nearly doubled between 1885 and 1889, while it remained stationary on the United States' side. Herring, however, shows better on the United States than on the Canadian side; the enormous quantity of 37,000,000 pounds having been caught in 1889, on the south side of Lake Erie alone. The yield of salmon-trout for the year 1889, was below that of 1885, but it should be remarked that this decline is twice as great on our neighbours' side as on ours. The decrease of sturgeon in our waters is more than made up by the large surplus of nearly 500,000 pounds of pickerel. And again, this decrease in the sturgeon fishery was much more felt on the United States' side than on ours, as can be shown by the following figures:—in 1885, the United States catch of sturgeon, on Lake Erie, was 4,700,000 pounds, and in 1889, only 1,200,000 pounds, while ours shows a decrease of only 50,000 pounds.

The tables giving the number of men and the value of the fishing material, show that while the number of fishermen employed in the United States has decreased 30 per cent during these five years, it increased 12 per cent on our side. The same decline is noticeable in the United States vessels and boats; while our fishing fleet increased 150 per cent. Strange to say, however, while the number of fishermen in United States waters shows a considerable falling off, the fishing implements have largely increased. In 1889, our neighbours used 63 per cent more pound-nets than in 1885, and on Lake Erie their number was doubled. It is a matter for surprise, that these inland waters do not show greater signs of exhaustion when the immense quantity of twine used on the United States side is taken into consideration. In 1889, there were nearly 3,000 pound-nets used in their waters. On Lake Erie alone, they had 1,838, and this enormous quantity has undoubtedly been increased since. On our side, there were only 264 pound-nets in operation during the year 1889, and 368 in 1892; of these, 210 were on Lake Erie.

While the tables show that the value of gill-nets used in the United States waters of Lake Erie in 1889, was \$94,978, our returns give only \$1,950 for the same year, showing the enormous difference in the quantity of twine used for gill-net fishing.

The United States census tables conclusively show that the finer grades of fish are steadily disappearing from their waters. The reason for this is not difficult to find. Their present large catches mostly consist of herrings and other coarse grades of fish. For instance, the census bulletin returns over 5,000,000 pounds of catfish and perch, which are not even classified in fishery statistics.

WHITEFISH CLOSE SEASON ON THE DETROIT RIVER, ETC.

(BY PROFESSOR E. E. PRINCE, B.A., F.L.S., &c.)

That the enforcement of close seasons and other protective regulations for whitefish on the Canadian side of the Great Lakes and border waters should have caused some discontent amongst Canadian fishermen is not surprising. When the dividing waters are narrow as in the Detroit River, St. Clair Lake and River, such dissatisfaction is accentuated. The United States fishermen carry on their operations under no restrictions, and at all available seasons. To our own fishermen, under whose eyes the American fishermen pursue the industry, the rigid enforcement of a close season and other regulations is peculiarly irritating. But any supposed advantages enjoyed by the United States fishermen are found on strict inquiry to be baseless, and on the other hand the alleged grievances on the Canadian side, in these waters, have no better ground. As a matter of fact, the United States policy has proved most injurious to their own fishermen's interests and is wholly and emphatically disapproved by the leading men engaged in the fishing industry in Detroit and other important centres.

Detroit it may be mentioned has one of the greatest fish-markets on the continent, and the view that prevails there is entirely in favour of the Canadian policy. It is not the case that the absence of restrictions on the American side has been detrimental to our fishermen, or that United States fishermen are reaping benefits of which Canadian fishermen are deprived. Careful inquiries on the spot have abundantly shown that.

Any alteration in the existing close season would indeed be an injury to the Canadian fishermen and would bring serious results, leading rapidly to the total destruction of the whitefish fishery.

This is demonstrated by the following facts:—

(1.) The Canadian side is and always has been the chief resort for the whitefish. The great fish-markets of Detroit and elsewhere look to the Canadian side for their main supplies of whitefish, which breed and are hatched and reared in our waters.

(2.) The November schools of whitefish, which pass up the Canadian side are all spawners, just about to deposit their eggs. It is of the highest importance to protect them just at that time—a time which the present close season covers.

(3.) Parent fish in rivers and lacustrine waters when ascending to the spawning grounds always take the most direct course and are not easily turned aside, as experienced fishermen are well aware. No more erroneous idea could be entertained than the supposition that whitefish wander aimlessly hither and thither from one side of a river or lake to the other. In these waters, as in other waters, it is certainly not the case that the schools of breeding fish deviate from their usual course, and cross from side to side so that fish caught by American fishermen during our close season would be caught by Canadians were they permitted to fish at that time.

(4.) Not only has our side been the chief resort for the spawners, but the pollutions of Detroit City and numerous factories on the American side, as well as sewage and other deleterious matters, have tended to drive the whitefish to the purer water on the Canadian side, and thus increased the schools of spawners in our own waters.

(5.) The numberless nets, traps and pounds set in American waters and extending far from shore intercept the migrating fish, break up the spawning schools, and drive them to our side. Our close season affords them freedom from these disturbances, and encourages them to come to our side.

(6.) The persistent and reckless over-fishing carried on at all seasons on the American side has really proved unprofitable and disastrous. The failures among those engaged in the United States fish trade in Lake Erie and Detroit River areas amounted recently to no less a sum than \$600,000 or \$700,000 at a moderate estimate.

In contrast to this, the wise regulations in our own waters have prevented similar ruin and loss to those engaged in the Canadian whitefish industry. "Canadian fishermen do well" was the emphatic statement of one of the leading men in

the fish trade at Detroit this fall: but amongst United States fishermen (in the waters here considered) fishing during the last two falls has been worse and worse, and if no improvement takes place this fall, it is a prevalent opinion amongst Detroit fish merchants that a serious crisis will be reached.

(7.) Whitefish caught in November have for some weeks ceased to feed, and are not only soft, but of less commercial value, because swollen with spawn. After capture these distended spawners are found to shrink so rapidly that they lose 18 pounds to 20 pounds per 100 pounds weight, and realize a considerably diminished market value. Fish merchants are well aware of the diminished value and inferior condition of spawning whitefish. Indeed, inferior No. 2 whitefish, as they are called, have during recent years been quite "a drug" in the market, and it has proved wholly unprofitable to capture and market these fish. The existing regulations in Canada have prevented this capture of inferior and unprofitable fish, and relaxation of the regulations could prove beneficial to nobody in the end.

(8.) Perhaps the best testimony to the wisdom and utility of the department's regulations is furnished by the attempts to establish in the State of Michigan similar close seasons. Were the present policy on the opposite shores so highly satisfactory as many Canadian fishermen at times imagine, such attempts would never be made. So beneficial to all interested has the Canadian policy proved to be, in the opinion of many leading men in the State of Michigan, that in order to save their fisheries from destruction in these waters, earnest efforts have been made and no doubt will be made again to imitate our restrictions and regulations and enforce them on the United States side.

Were such uniform regulations enacted and enforced the alleged grievances of Canadian fishermen would disappear, the planting and artificial propagation of whitefish on both sides would have fair play, and the future welfare of the fisheries in these waters would be assured.

CLOSE SEASON FOR WHITEFISH AND SALMON-TROUT ON THE DETROIT RIVER.

(BY COMMANDER WILLIAM WAKEHAM, M.D.)

The undersigned holds that there can be no difference of opinion as to the absolute necessity of a close season for the above fish.

All evidence points to the fact that in Lakes Ontario and Erie, as well as in the Detroit River and Lake St. Clair the fisheries have decreased.

It is a sufficiently well established fact that all fish of the salmon tribe return to the same spawning grounds, in the case of the whitefish and salmon-trout, it is well known that as the end of October approaches they move out of the deep water where they pass the greater part of the season, towards certain well known grounds, generally reefs, gravel bars, hard sand banks, or flat honey-combed rocks, in shoal water and generally well in shore, and that on these grounds between the end of October, and the first of December they deposit their spawn, returning to deep water as soon as the act of spawning is over.

Whitefish and trout do not remain long on the spawning grounds, they come in slowly, but directly they have spawned they return to deeper water. It is not the case that what are called Canadian fish are taken to any great extent in United States waters, a few may straggle from the schools but the great mass of the fish that spawn in our waters never get within reach of seines or pounds fished on the other side.

Until within the last few years, it was at this season (in November) that fishermen did most of their fishing for these fish, and it was undoubtedly by taking the fish in great numbers on their spawning grounds, before they had deposited their eggs, and by hauling the seines directly over the beds of eggs, that the great destruction of salmon-trout and whitefish was first begun. At one time these fish were only taken in the time and manner described above, and they were not fished to any extent during the rest of the season, but now this rest is not given them,

they are fished for in deep water, and are followed day by day in all their migrations, so that they really have no asylum whatever. No fishery could stand this. In the case of the salt water fishes there are always times when they get far beyond our reach and thus get a rest. This is not the case in the inland waters; large as the great lakes are, the fish are followed all over them, so that they can always be taken. In view of this, it is of the greatest consequence that during the breeding season, when the fish approach the shores during November, they should be most strictly protected. It is quite possible that in certain localities when the fish congregate to spawn, and where seines have heretofore been used, that the stoppage of all fishing in November may entail some hardship, but none the less, the regulation should be enforced, as it is better that a few should suffer for the moment than that the main fishery of a great lake should be permanently injured.

The regulation stopping all fishing in November may, in some places where the dividing waters are narrow, be felt to be severe by some of our fishermen, from the fact that their fellows in the United States waters are bound by no such restriction. At the first thought this may to some seem unreasonable, but when it is known that in most places where our waters join those of the United States, the fisheries on the Canadian side are not depleted to anything like the same extent as they are on the United States side, and that the cost to the fisherman of taking the same quantity of fish is greatly less on the Canadian side, as our men are not compelled to use anything like the same amount of outfit. It is well to consider why this is so, and if we do, we must admit that the reason for these facts is that the wise restrictions imposed by the department have prevented our fisheries from being exhausted to the same extent as they are on the other side. No thoughtful fisherman considers the absence of all regulations on the United States side, as wise or prudent, their own best fishermen and fishery authorities all lament the condition of affairs, and do not hesitate to say that unless some regulations and restrictions, such as we have in force, are soon applied on their side, the end of their fisheries in Lakes Erie and Huron is not far off. Several of their large fishing firms have recently failed, owing to the fact that their fishermen were not able to pay back the enormous sums advanced them for outfits, and all their best fish houses are looking to Canada to furnish the fresh fish supply of the future. In view of this, I think it clearly behooves us to look sharply after our fishery regulations, and chief of these must be the close season during the spawning month.

I could not advise any relaxation of the regulation fixing the close season for whitefish and salmon-trout.

INTERNATIONAL FISHERIES COMMISSION.

In view of the work of the Commissioners appointed on behalf of the United States and Canada to enquire into the condition of the fisheries in waters contiguous to both countries, it may be useful to repeat much that has been said upon the subject involved in previous reports of this department.

Some of the following statements are therefore taken from these reports :—

INTERNATIONAL LEGISLATION.

Under this head the following observations occur in past annual reports :

“ 1872 :—The rapid diminution of marketable fishes in those waters which border on the United States and Canada, particularly between lakes Erie and Huron, claims early attention. Whilst within Canadian jurisdiction certain established rules control the dates and methods of fishing, there are practically no restrictions in the adjoining limits; consequently much of the good which our fishery laws design to accomplish is frustrated to the mutual damage of fishing pursuits in these waters. If it were possible to induce the State Governments of Michigan, Ohio, New York and Vermont to unite in ascertaining how far and in what manner the prevalent causes of deterioration may be affected by judicious legislation, and promptly enforce some moderate restrictions, I should suggest assimilating as closely as practicable the necessary existing regulations enforced by Canadian officials.

"There is every reason to believe that the effect would prove mutually beneficial, and we might confidently expect a marked improvement in the almost international fisheries of bordering waters.

"1873.—The manifest decline of the fisheries on the American shores of the Great Lakes has induced special efforts to restore them. In this the Federal and State Governments are co-operating. Where these waters border closely on the United States and Canada, it becomes a common necessity to assimilate as nearly as practicable the local fishery regulations. This is very easy as respects the Dominion, owing to the large statutory powers conferred on the Government, and the elasticity of our protective system. There is every desire to assist and co-operate with the Federal and State authorities in attaining such improvements as shall be mutually advantageous to us as near neighbours. Besides the United States Commissioner and his efficient staff of assistants, there are now thirty-seven State Commissioners appointed for purposes connected with the restoration and preservation of these inland fisheries.

"1874.—Reference was made in last year's report to the expressed desire of the Federal and State Fishery Commissioners that uniform legislation should be applied to the fisheries in such waters as border on the United States and Canada. Whenever the necessary restrictions are adopted in neighbouring States, the undersigned will be prepared to suggest such local regulations as may prove mutually beneficial. At present the unrestricted and destructive manner in which fishing is carried on by the United States citizens near our water boundary, compels us to allow greater privileges to Canadian fishermen than consist with the due preservation of fish.

No action having taken place by either the Federal or State authorities, the matter was brought by you under special notice by the subjoined report addressed to the Governor General in Council, on the 23rd of September, 1875:

"The undersigned desires to draw the attention of the Government to a peculiar difficulty attending the adoption and enforcement of restrictive measures for the protection and increase of fish frequenting in common the frontier waters of the United States and Canada. Certain regulations as to the methods and periods of fishing have been found necessary to preserve the young fish from destruction, and to protect the parent fish during seasons of reproduction; also to protect the fishing grounds generally against excessive fishing. Whilst along the Canadian frontier, and on the inland waters connected with the Great Lakes and the River St. Lawrence, these judicious restrictions exist, and the fisheries are steadily improving, no similar restrictions are observed by United States fishermen in adjoining waters. This circumstance occasions great dissatisfaction among Canadians, who regard it as an injury to them that foreigners should thus by unrestricted fishing reap the benefits as well of an increased supply as of unlimited operations.

"The undersigned begs to suggest that official communication should be had with the State authorities of Michigan, Ohio, Pennsylvania, New York, Vermont and Maine, inviting attention to the necessity for legislation on this subject."

An Order in Council based thereon was transmitted to Her Majesty's Minister at Washington, who communicated on the matter with the State Department, and suggested that the attention of the Governors of the States mentioned should be invited to the subject.

A letter was addressed last winter to the United States Commissioner of Fisheries:—

DOMINION OF CANADA,
DEPARTMENT OF MARINE AND FISHERIES,
FISHERIES BRANCH,
OTTAWA, 4th February, 1875.

"MY DEAR SIR,—Having submitted to the Minister (Hon. A. J. Smith) your cordial invitation to join in a meeting of the Fish Commissioners of the several States of the Union and of the United States, in New York next week, for the purpose of mutual conference and consultation on subjects of interest in connection with the multiplication of food fishes, and the necessary regulations for their pro-

tection, I am to express his and my own regret that the assembling of Parliament this week, and consequent pressure of official business, render it impossible for me to accept. This is the more to be regretted, because, in addition to the pleasure and advantage which such attendance would undoubtedly afford, it also deprives me of an opportunity to witness the discussions of the American Fish Culturists' Association, of which it is my valued privilege to be an executive member. Notwithstanding such disappointment, the Minister feels gratified in being enabled to mark his appreciation of your purpose and responds partially to your wishes, by desiring Mr. Samuel Wilmot, with whose zealous attention to fish culture you are already acquainted, to attend both the conferences of the Commissioners and the proceedings of the Association. Canada takes a mutual interest in the investigations and observations which these able and patriotic bodies are now prosecuting.

"The International object and Continental character with which you endeavour to invest the whole enterprise, are also duly recognized.

"I have read with very great interest indeed, and with considerable profit, the excellent reports emanating from the United States Commission of Fish and Fisheries, and also the suggestive statements of the various State Fishery Commissioners, together with the instructive papers of the American Fish Culturists' Association. The activity and progress which they display, not less than the practical skill and ability which characterize such exertions, claim the hearty congratulations of everybody concerned about an abundance of wholesome food for the nation. Although the field and fruits of our own efforts may be considered small in proportion to those of the neighbouring Republic, we readily perceive that some of the chief difficulties to be met and overcome resemble in character those we have already encountered in Canada. But there is every encouragement to persevere in the knowledge that the general intelligence of the people, once informed and educated by such means as these Commissions and Associations are adopting, will ultimately second your efforts, and must render the work one of permanent national importance. The Canadian Fishery Laws convey ample power to regulate and restrict all modes and seasons of fishing; but, as affecting waters bordering on the United States and Canada, the regulations requisite to ensure due protection and increase for the more valuable varieties of commercial fishes which frequent either shores, are still kept in abeyance, by reason of continued neglect for several years past to restrict in any manner whatever the fishing pursued by the United States citizens to an excessive extent, and by improvident methods, along the frontages of adjoining territories of the American Union. This department would not only be prepared from time to time to assimilate all necessary restrictions in these localities, but would be gratified to find some near prospect of the present hindrances to improving our border fisheries being even gradually removed. If it is intended to re-stock certain of your streams with salmon and shad, requiring access to and from the sea through Canadian channels, it should be early considered under what reciprocal legislation the advantages of this important undertaking may be mutually secured.

"There are, in communications received from you, two points which require more definite notice. The first relates to joint arrangements for hatching whitefish on the Detroit River; and the same reason for indecision explained in my letter of 21st September last still exists. The second refers to continuance of explorations in the Gulf of St. Lawrence. With reference to this service, I am happy to inform you that the department proposes to continue it next season on an improved scale, in conjunction with enlarged facilities for regulating and developing the estuary and river fisheries, and the cultivation of lobsters and oysters around the coasts of Canada. While you are pleased to observe that the limited explorations made by Mr. Whiteaves have proved serviceable to the extensive investigations which you are prosecuting into the marine life of the coast on behalf of the United States Government, each having a direct practical bearing on the fisheries, we can scarcely hope with so small a staff and so few appliances to accomplish anything of sufficient moment to deserve the credit of a co-operative pursuit. Nevertheless, we shall gratefully avail ourselves of the vast and varied information your Commission procures, which in a scientific and practical sense doubtless touches conditions and

productions common to North American waters, and will in return contribute with much pleasure our very humble share to the cause of practical science.

"Be pleased to accept sincere thanks for many courtesies, and to assure your associates both in the Commission and Association of my warmest sympathy and regard.

"I am, my dear sir,

"Very truly yours,

"W. F. WHITCHER,

"To the Hon. SPENCER F. BAIRD,

"Commissioner of Fisheries."

"United States Commissioner

"of Fish and Fisheries,

"New York."

FISH CULTURE.

In connection with the above, the following remarks appeared in the number of 27th December, 1891, of *Forest and Stream*, a leading sporting paper of New York, relative to the jurisdiction of the State of Pennsylvania over the waters of Lake Erie, on a judgment of the Supreme Court declaring that the legislative powers of the state over the waters of Lake Erie were absolute:

"The only rights which the states have surrendered to the general government extend to admiralty and maritime cases. The fishery is regulated by the states. We have, therefore, along the chain of great lakes a body of waters controlled to their middle line by the states, while the other half is under the jurisdiction of Canada; but concurrent legislation in the interests of the fisheries cannot originate between the United States and Canada jointly, for no agreement would be binding upon the latter government as against a commonwealth which has not the treaty-making power. This is the present cause of serious difficulty in the establishment and operation by the United States of a fish hatchery in the State of New York to stock the waters of Lake Ontario. In the resolution of Congress carrying an appropriation for such a hatchery, the stipulation was made that the United States Fish Commission must first be satisfied that New York has taken efficient measures for the regulation of periods for fishing and for proper protection of fish in the spawning season in the waters of northern New York. Just how New York, or any other state, is to arrive at concerted action with Canada, except through the intervention of the general Government, is hard to see; but there exists a strong and perfectly natural public sentiment in most of the states bordering on the lakes against surrendering to the Government such control of the fishery as may be thought necessary for the success of artificial stocking of the waters."

In connection with this matter, Capt. Collins, in the last report of the United States Commission of Fish and Fisheries, speaking of the fisheries of the great lakes, says:—

"The marked diversity in the laws regulating the fisheries of the states bordering on the great lakes is a matter which appears to deserve consideration. The desirability of having some co-operative action on the part of the various lake states would seem to be apparent, in order that legislative enactments might have an equal bearing and influence upon the fisheries and the fortunes of the fishermen."

At a meeting of representatives from Canada and the State of New York to consider and recommend measures looking to the adoption of uniform laws for the protection, preservation and multiplication of the food fish supply of the international waters lying between these respective countries, it was shown that the food fish supply of the great lakes has been for the past thirty years suffering rapid diminution. On the New York side of Lake Ontario, where salmon, trout and whitefish formerly were so abundant as to furnish all the near markets with an abundant supply at prices within reach of the means of the day labourer, the product now scarcely recompenses the netter, and these fish, once so abundant and cheap, are no longer available for food to the multitude, but have become table luxuries to be enjoyed only by people of ample means.

On the Ohio side of Lake Erie there has been a nearly equal falling off of the higher grades of fish, but there still remains, on account of the greater fecundity of the coarser kinds, a fair supply of what are commonly known as pickerel, blue pike, pike, perch and bass, which still afford a fair market stock at moderate cost.

Further up the great lakes the stock of whitefish is yet abundant.

The cause of the growing scarcity is attributed to the rapid and enormous increase of population in all the states and provinces bordering on the great lakes, which has caused a proportionally increased demand for food of all kinds.

The close seasons in Canada were in 1891, as follows:—Whitefish, 15th October to 30th November; salmon-trout, 15th October to 30th November; pickerel, 15th April to 15th May; bass, 15th April to 15th June. In the neighbouring states the close seasons for the above-named fish are as follows:—Michigan, none; Ohio, none; New York, bass, 1st January to 1st July; Vermont, pickerel and bass, 1st February to 1st June; Maine, none.

In this connection, attention is directed to the following extract from the eleventh biennial report of the Fish Commissioners for the State of Vermont, for the year 1892:—

UNIFORMITY OF LAWS.

When similar conditions and seasons prevail in neighbouring states the operation of the laws for the protection of the fish and game which inhabit such states should be uniform. Many departures from this rule occur in the operation of the laws as between Vermont and the states and provinces contiguous thereto.

As an illustration, the close season for black bass in Vermont ends fifteen days earlier than in New Hampshire, and the citizens of the former state can take bass from the Connecticut when it is unlawful to do the same thing from the New Hampshire side of the same waters. In fact it is a question whether it is illegal in Vermont to take bass from the Connecticut at any season, as Sec. 3873, R. S., relates to the protection of black bass "in the waters of the state," but the west bank of the Connecticut River is the east line of Vermont.

While the above mentioned defects have been the subject of remonstrances from the Fish Commissioners of New Hampshire, they are lost sight of when the condition of affairs in the waters of Lake Champlain, bordering on the Dominion waters of the same lake is brought to the attention of the Commissioners by the lack of uniformity of existing laws for the protection of fish in these contiguous waters, resulting in a serious injustice to the citizens of Vermont.

Reference is made to the Canadian custom of licensing fishermen to catch fish by the use of seines in the Dominion waters of Lake Champlain, generally known as Missisquoi Bay. While only a small portion of Lake Champlain is in Canada, the Canadian portion appears to be the spawning grounds for nearly all the wall-eyed pike of the entire lake.

While tons of these fish are taken in seines on their way to and from the spawning grounds in Dominion waters, it is not lawful to take them in any manner in Vermont waters, or to have them in possession.

With this condition of things, our laws are not sustained by public opinion, and consequently it is impossible to enforce the laws against netting in waters contiguous to Canada without great and unwarranted expense.

The Commissioners do not intimate that the laws of Vermont for the protection of fish in Lake Champlain are defective or perfect, but that the Canadian laws should be in unison with them. Much correspondence on this subject has been carried on between the Commissioners and the Canadian authorities. Finally a full statement of the case was communicated to the Hon. John W. Foster, Department of State, Washington, D.C., and the United States Government is now considering the question with the Government of Canada. The Commissioners entertain hopes that this correspondence will result in necessary measures being taken for the protection of fish in the waters contiguous to the two countries.

At a conference held in Washington during the spring of the present year (1892) between the delegates from the Canadian Government and the Secretary of State of

the United States respecting the extension and development of trade between the United States and the Dominion of Canada, and other matters, among other things the following proposal was submitted:—

It is proposed that a commission of two experts shall be appointed, one by the Government of the United States and one by the Government of Great Britain, to consider and to report to their respective Governments (either jointly or severally) as to the restrictions and regulations which should be adopted on the following subjects:—

1st. The prevention of destructive methods of fishing in the territorial and contiguous waters of the United States and Canada respectively, and also in waters outside the territorial limits of either country,

2nd. The prevention of the polluting and obstructing of such contiguous waters to the detriment of the fisheries and navigation.

3rd. The close seasons which should be enforced and observed in such waters by the inhabitants of both countries.

4th. On the subject of re-stocking and replenishing such contiguous waters with fish ova and the means by which fish life may be therein preserved and increased.

The United States Secretary of State, the Honourable John W. Foster, after referring to the propositions above quoted, points out that the several lines of inquiry indicated come, so far as the United States is concerned, within the scope of the operations conducted for years past by the United States Fish and Fisheries Commission, which in its operations has accumulated a mass of information, much of which would be available in the premises, and that the commission was possessed of resources necessary for any further inquiries without the appointment of a special commission.

Understanding that similar conditions existed in Canada, and as the necessary machinery and considerable of the data requisite to a joint investigation were already available, speedier results could be attained by their utilization, Mr. Foster proposed the following basis for an agreement to be reached by a diplomatic exchange of notes.

DEPARTMENT OF STATE, WASHINGTON, October 4, 1892.

SIR,—As the result of our several recent conferences on the subject of giving effect to so much understanding reached in concert by the Secretary of State and the delegates of the Government of the Dominion of Canada, on February the 15th last, as relates to the prevention of destructive methods of fishing in the contiguous waters of the United States, and Canada, and the preservation of the fisheries thereof, I have now the honour to submit the views of this Government on the matter to the end of reaching a formal agreement thereon.

The proposition of February 15th, 1892, in this regard, was that a commission of two experts should be appointed—one by the Government of the United States, and one by the Government of Great Britain—to consider and report to their respective governments, either jointly or severally, as to the restrictions and regulations which should be adopted on the following subjects:

1st. The prevention of destructive methods of fishing in the territorial and contiguous waters of the United States and Canada respectively, and also in waters outside the territorial limits of either country.

2nd. The prevention of the polluting and obstruction of such contiguous waters to the detriment of fisheries and navigation.

3rd. The close seasons which should be enforced and observed in such waters by the inhabitants of both countries; and

4th. On the subject of re-stocking and replenishing such contiguous waters with fish ova and the means by which fish-life may be therein preserved and increased.

I deem it convenient to thus quote in full the text of the tentative understanding of last February as expressive of the general scope and direction of the enquiries to be jointly set on foot, and as the ground work upon which to essay a fuller and more precise international agreement.

The several lines of enquiry having relation to the different aspects, whether general or particular, of the questions so presented fall, so far as this government is concerned, within the purview of the operations conducted for a number of years past by the United States Commission of Fish and Fisheries:— Which in its investigations and in the practical application of its methods and making use of the extensive establishment and ample means appropriated by Congress, has massed a stock of information, much of which may be found available for the purpose of investigation and recommendation for which the joint commission is proposed to be organized. I am advised that the United States fish commission has within itself the resources in men and means to conduct such further enquiries in relation to the statistics, methods and condition of the fisheries in question, as to the joint commission, or the American representative thereon, may indicate as desirable for their information.

A similar fish commission is understood to exist in the Dominion of Canada, and to have pursued like valuable investigations and practical operations for a number of years past. The necessary machinery, and a large part of the data for the proposed joint investigation appear therefore, to be already at the command of the Government of the United States, and Her Britannic Majesty's Government, without the necessity for creating other or independent methods for accomplishing the purpose in view, by convention or coincident legislative appropriation. As the subject is to arrive at such concurrent recommendations as may commend themselves to the good judgement of the respective governments and open the way in case of accord thereon for a formal conventional agreement in promotion of the mutual interests of their respective citizens and subjects, as regards their equal and common benefit in the conservation of food fishes in the territorial and contiguous waters of the United States, and Her Britannic Majesty's possessions in North America, it seems most desirable for the two parties to avail themselves in common, so far as may be practicable, of the means already at hand, in order that the end in view may be the more speedily attained. That this may be conveniently accomplished, I have the honour to propose for the consideration of Her Britannic Majesty's Government the following bases for an arrangement to be reached by a diplomatic exchange of notes.

I. The Governments of the United States of America and of Her Majesty the Queen, of the United Kingdom of Great Britain and Ireland agree that a commission of two experts shall be appointed, one on behalf of each government, to consider and report to their respective governments, either jointly or severally, or jointly to both governments, with regard to matters in which they may be in accord and severally to their respective governments with regard to matters of non-concurrence concerning the regulations, practice, and restrictions proper to be adopted in concert on the following subjects, viz. :—

(a.) The limitation or prevention of exhaustive or destructive methods of taking fish and shell-fish in the territorial, and contiguous waters of the United States and Her Majesty's possessions in North America respectively, and also in the waters of the open seas outside the territorial limits of either country to which the inhabitants of the respective countries may habitually resort for the purpose of such fishing.

(b.) The prevention of the polluting or obstructing of such contiguous waters to the detriment of the fisheries or of navigation.

(c.) The close seasons expedient to be enforced and observed in such contiguous waters by the inhabitants of both countries as respects the taking of the several kinds of fish and shell-fish.

(d.) The adoption of practical methods of re-stocking and replenishing such contiguous and territorial waters with fish and shell-fish, and the means by which such fish life may be therein preserved and increased.

II. The commissioners to be so appointed shall meet at the city of Washington within three months from the date of this present agreement, and shall complete their investigation, and submit their final reports thereof, to the two governments as herein provided, within two years from the date of their first meeting.

III. The contracting governments agree to place at the service of the said commissioners all information and material pertinent to the subjects of their investigation which may be of record respectively in the offices of the United States Commission of Fish and Fisheries, and in the Department of Marine and Fisheries of the Dominion of Canada; and further to place at the disposal of the said commissioners acting jointly any vessel or vessels of either of said Fish Commissions of the United States and of Canada as may be convenient and proper, to aid in the prosecution of their investigation in the contiguous or adjacent waters aforesaid.

It is further agreed that, if required by either or both of the said commissioners, a competent employee of either or both of the said fish commissions of the United States and of Canada shall be detailed to assist the said commissioners in the preparation of their reports.

IV. Each government will defray the expenses of its commissioner, and of such employee as may be detailed to assist him as provided in the preceding section.

V. The two governments agree that so soon as the reports of the commissioners shall be laid before them as aforesaid, they will consider the same and exchange views thereon, to the end of reaching, if expedient and practicable, such conventional or other understanding as may suffice to carry out the recommendations of the commissioners, by treaty or concurrent legislation on the part of the respective governments or the legislatures of the several states and provinces, or both as may be found most advisable; but nothing herein contained shall be deemed to commit either government to the results of the investigation hereby instituted.

I beg that you will submit the foregoing draft of agreement to Her Britannic Majesty's Government for consideration, with the intimation that if it be accepted, this government will be prepared forthwith for its part, to give full force and effect from the date when such acceptance may be notified to it.

I have, &c.,

(Sgd.) JOHN W. FOSTER.

The Honourable MICHAEL H. HERBERT,
&c., &c., &c.

Mr. Herbert to Lord Stanley of Preston.

WASHINGTON, 6th October, 1892.

MY LORD,—With reference to my despatch, No. 79, of the 13th ultimo, I have the honour to inclose copy of a note which I have received from Mr. Foster, submitting the draft of an agreement which he suggests should be effected by an exchange of notes in regard to the preservation of the fisheries in waters contiguous to Canada and the United States.

Mr. Foster told me a few days ago that he thought, for the reasons which he has repeated in his note, that a convention was unnecessary at the present moment, and that his proposal as to the form of the agreement to be reached would be simpler and more expeditious.

I have, &c.,

(Sd.) MICHAEL H. HERBERT.

His Excellency

LORD STANLEY OF PRESTON, C.C.B.,
&c., &c., &c.

On receipt of the above the following report of a Committee of the Honourable the Privy Council, was approved by his Excellency the Governor General in Council, on the 31st October, 1892:—

The Committee of the Privy Council have had under consideration a despatch, hereto attached, dated 6th October, 1892, from Her Majesty's Representative at Washington, covering a communication from the United States Secretary of State, dated 4th October, 1892, to Mr. Herbert, resulting from several conferences on the subject of giving effect to so much of the understanding reached by the United

States Secretary of State, and the delegates from the Government of Canada on the 15th February last, as relates to prevention of destructive methods of fishing in the contiguous waters of the United States and Canada and in other waters, and the preservation of the fisheries thereof, and with the object of reaching a formal agreement the Secretary of State submits the views of his Government.

The Minister of Marine and Fisheries to whom the question was referred observes that the proposition of 15th February, 1892, is referred to as the appointment of a commission of two experts, one by each Government, to consider and report, either jointly or severally, as to the restrictions and regulations on the following subjects, namely :

1st. "The prevention of destructive methods of fishing in the territorial and contiguous waters of the United States and Canada respectively, and also in waters outside the territorial limits of either country.

2nd. "The prevention of the polluting and obstruction of such contiguous waters to the detriment of fisheries and navigation.

3rd. "The close seasons which should be enforced and observed in such waters by the inhabitants of both countries ; and

4th. "On the subject of re-stocking and replenishing such contiguous waters with fish ova and the means by which fish life may be therein preserved and increased.

He, therefore, proposed certain bases for an agreement to be reached by a diplomatic exchange of notes :—

I. The Government of the United States of America and of Her Majesty the Queen of the United Kingdom of Great Britain and Ireland agree that a commission of two experts shall be appointed, one on behalf of each Government, to consider and report to their respective Governments, either jointly or severally, or jointly to both Governments, with regard to matters in which they may be in accord, and severally to their respective Governments with regard to matters of non-concurrence concerning the regulations, practice and restrictions proper to be in concert, on the following subjects :—

(a) "The limitation or prevention of exhaustive or destructive methods of taking fish and shell-fish in the territorial and contiguous waters of the United States and Her Majesty's possessions in North America respectively, and also in the waters of the open seas outside the territorial limits of either country to which the inhabitants of the respective countries may habitually resort for the purpose such fishing.

(b) "The prevention of the polluting or obstructing of such contiguous waters to the detriment of the fisheries or of navigation.

(c) "The close seasons expedient to be enforced and observed in such contiguous waters by the inhabitants of both countries, as respects the taking of the several kinds of fish and shell-fish.

(d) "The adoption of practical methods of re-stocking and replenishing such contiguous and territorial waters with fish and shell-fish, and the means by which such fish life may be therein preserved and increased.

II. The commissioners to be appointed shall meet in the city of Washington within three months from the date of this present agreement and shall complete their investigations, and submit their final reports thereof, to the two Governments as herein provided within two years from the date of their first meeting.

III. The contracting Governments agree to place at the service of the said commissioners all information and material pertinent to the subject of their investigations which may be of record respectively in the offices of the United States Commission of Fish and Fisheries and in the Department of Marine and Fisheries of the Dominion of Canada, and further to place at the disposal of said commissioners acting jointly any vessel or vessels of either of said Fish Commission of the United States and of Canada as may be convenient and proper, to aid in the prosecution of their investigation in the contiguous or adjacent waters aforesaid.

It is further agreed that if required by either or both of the said commissioners, a competent employee of either or both of the said Fish Commissions of the United States and of Canada shall be detailed to assist the said commissioners in the preparation of their reports.

IV. Each government shall defray the expenses of its commissioner and of such employee as may be detailed to assist him as provided in the preceding section.

V. "The two governments agree that so soon as the reports of the commissioners shall be laid before them as aforesaid, they will consider the same and exchange views thereon, to the end of reaching, if expedient and practicable, such conventional or other understanding as may suffice to carry out the recommendations of the commissioners by Treaty or concurrent legislation on the part of the respective governments or the Legislature of the several states and provinces, or both as may be found most advisable, but nothing herein shall be deemed to commit either Government to the results of the investigation hereby instituted.

The Minister of Marine and Fisheries reports that although the information at the command of the Canadian Government may not be so complete as that connected with the long established Fish Commission of the United States, important material has been collected by the Department of Marine and Fisheries, and that conferences between the experts proposed to investigate and deal with the subjects will no doubt lead to a full possession of the main facts connected with the fisheries in which the two countries are so much interested.

The Minister therefore, reports to Your Excellency that the terms of the draft agreement as submitted by the Secretary of State for the United States are acceptable.

The Committee advise that Your Excellency be moved to transmit a copy of this minute to Her Majesty's representative at Washington for his information.

All of which is respectfully submitted for Your Excellency's approval.

(Signed.) JOHN J. MCGEE,
Clerk of the Privy Council.

A reply based on the above having been communicated to the Secretary of State for the United States, was acknowledged as follows:—

DEPARTMENT OF STATE, WASHINGTON,
6th December, 1892.

SIR,—I have the honour to acknowledge the receipt to-day of your note of the 5th instant, by which you inform me that the Canadian Government has accepted the draft agreement for the preservation of the fisheries in the waters contiguous to Canada and the United States, as proposed in my note to Mr. Herbert, October 4th, last.

This reply consequently completes the agreement by exchange of notes as proposed by the communication of the 4th of October last, and fixes this day as the date of the agreement.

I have much pleasure in giving immediate effect to this agreement so far as depends upon the executive power, by informing you that the President has appointed as the representative expert of the United States for the purposes of the stipulated joint investigation Mr. Richard Rathbun, of the United States Fish Commission. I beg that you will advise me of the name of the expert to be appointed on behalf of Her Majesty's Government, in order that Mr. Rathbun may be instructed to confer with his Canadian colleague as to the time of meeting and plan of operations.

I have, &c.,
(Sgd.) JOHN W. FOSTER.

Sir JULIAN PAUNCEFOTE, G.C.B.

Sir Julian Pauncefote to Lord Stanley of Preston.

WASHINGTON, 14th December, 1892.

MY LORD,—With reference to Your Excellency's despatch, No. 70, of the 8th ultimo, I have the honour to inclose copy of a note which I have received from Mr. Foster, in which he states that the acceptance by the Canadian Government of

the proposal for the preservation of the fisheries in the waters contiguous to Canada and the United States, completes the agreement by exchange of notes, and that Mr. Richard Rathbun has been appointed the representative of the United States for the purposes of the stipulated joint investigation.

Mr. Foster adds, as Your Excellency will observe, that he will be glad to learn the name of the expert appointed on behalf of Her Majesty's Government.

I have, &c.,
(Sgd.) JULIAN PAUNCEFOTE.

His Excellency

LORD STANLEY OF PRESTON, G.C.B.

On receipt of the above the following report to Council was approved :

Certified copy of a Report of a Committee of the Honourable the Privy Council, approved by His Excellency the Governor General in Council, on the 13th January, 1893:

The Committee of the Privy Council have had under consideration a despatch hereto annexed, dated 14th December, 1892, from Her Majesty's Minister at Washington, intimating that the acceptance by the Canadian Government of the proposal for the preservation of the fisheries in waters contiguous to Canada and the United States, completes the agreement by exchange of notes, and announces that Mr. Richard Rathbun of the United States Fish Commission, had been appointed as the representative expert of the United States, for the purpose of the stipulated joint investigation, and asking that he be advised of the name of the expert to be appointed on behalf of Her Majesty's Government.

The Minister of Marine and Fisheries, to whom the despatch was referred, observes that clause I of the bases of agreement provides that the governments of the United States of America and of Her Majesty the Queen of the Kingdom of Great Britain and Ireland, should agree upon the appointment of a commission of two experts, one on behalf of the respective governments.

The Minister recommends that Mr. William Wakeham, M.D., acting officer in charge of the Fisheries Protection service and Inspector for the Gulf division of Canadian Fisheries, be appointed as the representative expert of Her Britannic Majesty's Government, for the purposes of the investigation.

The Committee advise that Your Excellency be moved to forward a copy of this minute, if approved, to the Right Honourable the Secretary of State for the Colonies, for the consideration of Her Majesty's Government.

All of which is respectfully submitted for Your Excellency's approval.

JOHN J. MCGEE,
Clerk of the Privy Council.

The agreement having therefore been perfected by exchange of notes, and the two experts named—these gentlemen met at Washington on the 2nd March, 1893, and arranged their plan of operations. The inquiry began on the Atlantic coast, on 1st June and continued without interruption from Passamaquoddy Bay along the waters of the River St. Croix and St. John, by way of Lake Memphremagog and the River St. Lawrence, along the north shores of Lakes Ontario and Erie to Detroit, when the inquiries on the lakes were closed for the season on the 14th of October.

The commissioners met again at Gloucester, Mass., on the 14th November to continue their inquiry into the question of the movements of the mackerel, and the manner of conducting that fishery.

I trust that as a result of this inquiry joint action may be taken by the Governments of the United States and Canada on the various points submitted to the experts for consideration, with a view to the preservation and increase of the fisheries in waters contiguous to the two countries.

EXTRACTS FROM THE STATE LAWS OF THE UNITED STATES IN
WATERS CONTIGUOUS TO CANADA.

NEW YORK STATE.

Chap. 488. An Act for the protection, preservation and propagation of birds, fish and wild animals in the State of New York and the different counties thereof.

Approved by the Governor, May 5, 1892.

Par. 131. No fish shall be fished for, caught or killed in any manner, or by any device except angling, in the waters of the St. Lawrence River, Niagara River or Lake Champlain, in this state, nor shall fish taken contrary to the provisions of this section be knowingly possessed.

Par. 132. No fish shall be fished for, caught or killed in any manner, or by any device except angling in the waters of Lake Erie, within one-half mile of the shores thereof, nor of any of the islands therein, or in the Cattaraugus creek or within five miles of the mouth thereof; nor in Lake Ontario within one mile of the shore nor of any islands therein, (the waters of Lake Ontario, in the county of Jefferson, included between Blue Rock Point in the town of Brownville, and the town lines between towns of Lyme and Cape Vincent, including Chaumont Bay, Griffin Bay and Three Mile Bay, are hereby exempt from the provisions of this Act, but sections one hundred and ten, one hundred and eleven and one hundred and sixty-eight of this Act, shall apply to said waters.) Nor shall fish taken contrary to the provisions of this section be knowingly possessed.

The meshes of nets used in Lakes Erie and Ontario, shall not be less than one and one-eighth inch bar. Par. 148. Penalties :

An attempt to violate the provisions of this article shall be deemed a violation thereof. A violation of any of its provisions shall be a misdemeanour, and in addition the violators of sections one hundred and thirty-one, one hundred and thirty-two, one hundred and thirty-four, one hundred and thirty-five, one hundred and thirty-six, and one hundred and thirty-eight and one hundred and forty, are liable to a penalty of one hundred dollars for each violation ; the violators of section one hundred and thirty to a penalty of five hundred dollars for each violation ; the violators of sections one hundred and thirty-seven, one hundred and forty-four, one hundred and forty-six and one hundred and fifty to a penalty of twenty-five dollars for each violation, and ten dollars for each fish so caught ; the violator of section one hundred and forty-seven to a penalty of fifty dollars for each violation.

STATE OF OHIO.

Fish, Nets, Shooting, Spears, etc., Black Bass.—Sec. 6968 (as amended 1890.) No person shall draw, set, place, locate or maintain, any pound-net, seine, trap, or fish-net, in Lake Erie, nor (in) Sandusky Bay, nor in Maumee Bay as far up as Maumee Bridge, nor in Portage Bay, as far up as Oak Harbour Bridge, from the fifteenth day of June to the tenth day of September inclusive. No person shall set, place, locate, or maintain, or catch fish, with a gill-net in any of the waters of the State, except in Lake Erie. No person shall set, place, locate, or maintain any fish-net on any of the reefs in Lake Erie. No person shall set, place, locate, or maintain in Lake Erie any portable fish-net within five hundred feet of any stationary fish net or lead thereof. No person shall set, place, locate or maintain, any net whatever within one-half mile of the mouth of any river or creek flowing into Lake Erie. No person shall catch fish in Mercer County reservoir between the twentieth day of May and the twentieth day of July inclusive ; or on the Licking or Lewiston reservoirs between the first day of June and the first day of October, inclusive, with any device except hook and line with bait or lure. No person shall, in any of the waters, either natural or artificial, lying in the state of Ohio or part therein, shoot or spear fish. No person shall draw, set, place, locate or maintain, or catch fish with a device called a trammel-net or with fyke-net or set-net, except as heretofore stated. No person shall in any of the waters of the State, except those heretofore named in this section, catch fish with any device whatever, except hook and line with bait or lure.

Close Seasons. Sec. 6968a (1.)—Whoever in the waters of any brook, creek, river, pond, reservoir, mill-race, tail-race, or in any body of water, natural or artificial, lying in the state of Ohio, during the spawning season of brook trout, or salmon or land-locked salmon, or California salmon, which season is hereby defined to extend from the fifteenth day of September in each year, to the fourteenth day of March inclusive, in the year following, shall catch in any manner with intent to kill, or offer for sale any brook trout, salmon, land locked salmon or California salmon, shall be punished by the same penalties fixed in section sixty-nine hundred and sixty-eight for the misdemeanours therein defined.

STATE OF WISCONSIN.

Whitefish.—Chap. 520 laws 1887 (abridged,) sec. I. It shall hereafter be unlawful for any dealer or other person to buy, or for any one to sell, or offer to sell, or for any one to have in his possession, in this state, or for any one to ship out of this state, any whitefish less than a pound and a half, round or undressed weight, or one pound dressed weight; provided, however, that any one engaged in fishing as a business may be permitted to have in their possession only such amount of whitefish of less than one and a half pounds in weight, as the warden in his judgment may think unavoidable; provided, further, that such amount shall under no circumstances exceed fifty pounds.

Sec. 2 (as amended April 16, 1889.) It shall be unlawful after the passage of this Act, for any person, for himself or another, to set in the waters of Chequamegon Bay south of an east and west line drawn at the lighthouse in said bay, known as the Chequamegon lighthouse, any pound, gill, or trap-net, for a term of five years. It shall be unlawful for any person, for himself or another, to set or cause to be set in the waters of Lake Superior, on or near the main shore thereof, from the mouth of the Montreal River to the mouth of the St. Louis River, any pound-net for a term of five years from and after April 1st, A.D. 1889.

Chap. 482 Laws 1889 (abridged). Sec. 1. Every person fishing for himself or for another, as an employee, shall, while fishing in any of the waters of Lake Michigan, Lake Superior, Chequamegon Bay, Green Bay and Sturgeon Bay, from the twentieth day of October to the first day of November, in any year, take the eggs from the female trout while alive, and the milt from the male trout when alive, and after mixing them together in a pail or pan, immediately cast them into the water where such fish are taken. And it is likewise made their duty to pursue the same course as to whitefish, from the first to the twenty-fifth day of November in each year. (Violation a misdemeanour, penalty \$10 to \$25 for first offense; \$25 to \$50 for subsequent offenses. Sec. 2. District Attorney must prosecute.

STATE OF MICHIGAN.

Sec. 2.—No person shall use any pound, trap, stake, gill or set-net or like device of any kind for taking fish in any of the waters of this state connecting lakes Huron and Erie, nor fish with any seine or sweep-net, beneath the ice which may be formed or frozen upon the surface of said water, between a radius of two miles from the outlet of Lake Huron and the mouth of the Detroit River; provided it may be lawful with pound-nets in that portion of Lake St. Clair, between a line drawn across said lake easterly; two miles northerly of Windmill Point Lighthouse, and a line drawn easterly across said lake from the mouth of Milk River, as laid down on the chart of Lake St. Clair made by the United States Engineer Corps on the survey of the Northern and North-western Lakes.

Sec. 6.—It shall not be lawful for any person to catch or take whitefish between the twentieth day of November and the first day of March succeeding, in each year in any of the said waters of Lake Erie or Detroit and St. Clair Rivers; and immediately after said twentieth day of November, all nets, piles, stakes, and other appliances of every kind which have been used in the business of fishing, shall

be carried or caused to be carried to the shore, or inside the channel bank, by the person or persons who have used them and they shall also cause the ground beneath the waters where such fishing has been carried on to be cleared so far as may be reasonable to be done, from all debris and material found thereon, which has resulted from said business.

STATE OF WASHINGTON.

Salmon in the Columbia.—Act Feb. 11, 1890, Sec. 1.

It shall not be lawful to take or fish for salmon in the Columbia River or its tributaries by any means, in any year hereafter, between the first day of March and the tenth day of April, or between the tenth day of August and the tenth day of September; and also, during the weekly close season time, that is to say, between the hours of six o'clock p.m. on each and every Saturday and six o'clock in the afternoon of the following Sunday; and any person or persons fishing for or catching salmon in violation of this section by catching salmon, or purchasing salmon unlawfully caught or having in his or their possession any such unlawfully caught salmon, shall be deemed guilty of a misdemeanour, and upon conviction thereof be fined in a sum not less than fifty dollars nor more than two hundred and fifty dollars.

Salmon in Puget Sound.—Sec. 4.—It shall not be lawful for any person or persons to take or fish for salmon during the months of March, April and May of each year, on the waters of Puget Sound. Any person violating the provisions of this section shall be deemed guilty of a misdemeanour, and upon conviction thereof be fined in a sum not less than fifty dollars, nor more than two hundred and fifty dollars. Sec. 5. For the purpose of more clearly defining the provisions of Section 4 of this Act, all that portion of the tide waters emptying into the Straits of Fuca, and the bays, inlets, streams and estuaries thereof, shall be known and designated in this Act as Puget Sound.

STATE OF PENNSYLVANIA.

Sec. 5.—No person shall by any means or device whatsoever catch or kill any black bass, rock bass or wall-eyed pike, commonly known as Susquehanna salmon, between the first day of January and the thirteenth day of May in any year, nor shall catch or kill any of said species of fish at any other time during the year, save with a rod, hook and line. Any violation of this section shall subject the offender to a penalty of ten dollars for each fish so caught; provided that neither this nor any of the preceding sections of this Act shall apply to fishing in the waters of Lake Erie.

Act of May 22, 1889, Sec. 1.—Be it enacted, etc. That from and after the passage of this act, it shall not be lawful for any person or persons to place any set-net or set-nets, fish-baskets, pound-nets, gill-nets, eel-weirs, kiddles, brush, or fascine-nets, fike-nets, or any other net or nets of whatever description or nature, or any other permanently set means of taking fish or otherwise, in the nature of seines, in any of the waters of Lake Erie, within the jurisdiction of this Commonwealth, within two miles from the entrance from any bay, or within one-half mile from the mouths of any streams, commonly known as and called creeks, flowing into said lake; nor shall any person make use of any device or appliance whatever for the purpose of taking, catching or killing fish within the above mentioned limits, or in the creeks flowing into said lake, save only with rod, hook and line. Any person violating the provisions of this section shall, upon conviction thereof, be liable to a penalty not exceeding one hundred dollars for each and every offence.

STATE OF VERMONT.

Lake Champlain, Possession, Search. Sec. 3880.—All pound-net, trap-net set-net and fike fishing, or any other device for entrapping or ensnaring fish, in the

waters of Lake Champlain, or the tributaries thereof, are hereby prohibited; and any person or persons who shall fish in said water with any such pound-nets, trap-nets, gill-nets, set-nets, fikes or any other device for ensnaring or entrapping fish, shall pay to the state a fine of one hundred dollars and the cost of prosecution. Any person discovering any such net or nets or devices for ensnaring fish, set or being used in the waters hereinbefore described, or on the shores thereof, contrary to the provisions of chapter 170 of the Revised Laws (which is this compilation) or any amendment thereof, may seize and destroy the same; provided, however, that seine fishing shall be allowed during the months of October and November in each year, and fishing with hook and line between the first day of June and the first day of February next after, and nothing contained in this section shall prohibit the capture of minnows for bait. Any person who takes or catches any black bass, pike, wall-eyed pike, shad or pond pickerel, from any of the waters, public or private, of this state, or from the waters of Lake Champlain, or has any of said fish in his possession, between the first day of February and the first day of June in any year shall pay to the state a fine of five dollars for each fish so caught taken or possessed, with cost of prosecution.

STATE OF MAINE.

Sec. 242.—From the 15th day of July to the 1st day of April following, there shall be a close time for salmon during which no salmon shall be taken or killed in any manner, under a penalty of not more than \$50 or less than \$10, and a further penalty of \$10 for each salmon so taken or killed; provided, however, that between the 15th days of July and September it is lawful to fish for and take salmon by the ordinary mode, with rod and single line, but not otherwise.

Sec. 52.—Whoever fishes for, takes, catches, kills or destroys any fish, except in tide waters, with net, seine, weir or trap, forfeits \$25 for the offence, and \$10 for each salmon or land-locked salmon, and \$1 for each and every other fish so caught, taken, killed or destroyed.

Sec. 53.—Whoever kills or destroys any sea-salmon, or land-locked salmon less than 9 inches in length, or any trout less than 5 inches in length, forfeits \$5 for each offence and 50 cents for every land-locked salmon or trout so killed or destroyed. Whoever has in possession any salmon or trout of less than the above dimensions shall be deemed to have taken them in violation of this section.

Sec. 54.—No person shall take, catch, kill, or have in possession at any one time for the purpose of transportation, more than fifty pounds of land-locked salmon trout or togue, in all, nor shall any such be transported except in the possession of the owner thereof, under a penalty of \$50 for the offence, and \$5 for every pound of land-locked salmon, trout or togue, in all, so taken, caught, killed, in possession, or transportation, in excess of fifty pounds, all such fish transported in violation of this section, may be seized on complaint, and shall be forfeited to the prosecutor. Whoever has in possession more than fifty pounds in all of such fish, shall be deemed to have taken them in violation of this section.

POUND-NETS, GILL-NETS AND SEINES.

INLAND FISHERIES.

Under the Act of 1858 (22 Vic., c. 86, s. 37) which was re-enacted in Consolidated Stat. Can. Cap. 62 S. 33, it was enacted as follows:—"No one shall construct any fish pound in any river" By the Acts of the Province of Canada of 1865 (29 Vic. cap. 11, s. 17, ss. 7) it was enacted as follows;—

"7. Bag-nets and trap-nets and fish-pounds are prohibited except for capturing deep-sea fishes, other than salmon. * * * *

After Confederation, by the Fisheries Act of 1868, the law was made the same as it is at present under Revised Stat. Can. chap. 95, s. 14, ss. 7. No one shall use a bag-net, trap-net or fish-pound except under a special license granted for capturing deep-sea fish other than salmon."

It is regrettable that in every country it is chiefly when fish become scarce or have nearly disappeared that public support is more ready given to efforts intended to moderate the destructive character of fishing engines.

The aims of the fishery regulations respecting fishing nets are :

1. To prevent their use when constructed in the form of traps or contrivances by means of which the fish would be taken in such quantities that the fishery soon becomes exhausted.

2. The limitation of the size of meshes, so that fish which have never reproduced their species and are immature may escape.

3. The prohibition of netting and fishing at a time when the fish are engaged in reproduction or are in a spawning condition.

The decrease of our inland fisheries is painfully evident. It is shown in the reports of fishery officers, of royal commissioners, and by the notorious diminution in size of the fish taken.

In many districts it is therefore truthfully said that the enforcement of fishery regulations is equivalent to the prohibition of fishing for a time.

In many of the inland waters it is yet possible to save the fisheries and to preserve them as an annual source of benefit and profit to the country.

An industry that is worth to Canada, as it stands, from eighteen to nineteen millions of dollars a year demands attention.

It will be impossible to preserve this great property, so far as the inland fisheries are concerned at least, unless fishery officers and the Department of Marine and Fisheries receive greater co-operation from the public in the future than has been the case in the past.

Almost every attempt either to promulgate necessary fishery regulations, or to reform them, meets with opposition from not only many fishermen, but others in fishing communities.

Many of the fishermen are poor in all fishing districts, they are poorer where the fisheries have diminished, and this fact has made it an issue between the man and the fish. A decision has been promptly and materially given in favour apparently of the man. This verdict, however, means the ruin of many in the end.

In the United States of America a mistaken philanthropy of this kind has brought most of the inland fisheries of that country to an end, and the fishermen have taken up other work.

While a commission of inquiry into the fisheries of Ontario is outstanding, a review of some of the information touching pound-nets, gill-nets and seines now in the hands of the department may be of value and interest to the public.

The history of the first introduction of the pound-nets into the inland lakes of Canada, was sometime about the year 1860.

Their introduction into Lake Ontario was by a fisherman using them to catch salmon, between Brighton and Toronto, along the shores of the lake, where salmon were found in great numbers from June till October, principally at the outlets of all rivers and other streams.

A conflict arose between the fishermen using seines, gill-nets, spears, &c., and those using the pound-nets. Petitions were got up by the former class, which very largely outnumbered the latter to do away with the pound-nets; and the legislature of that day passed the Act prohibiting the use of pound or trap-nets.

How this Act became over-ridden does not appear, it was probably by pressure brought to bear from time to time upon the department by interested parties, the result of which has been that the waters are filled with these nets.

A license has always been given for a pound-net without restrictions of any kind, in fact, the fishermen had a "carte blanche" for the use of these nets, the result has been that, by reason of the unrestricted use of small meshed pounds, the young and immature fish of all kinds have been mercilessly slaughtered, which has hastened the depletion of valuable species of fish in many of the waters of Canada.

The destructive features of pound-net fishing are impressed on the languishing fisheries of the lake states and the impoverished shores of the north-eastern Atlantic states of the American Union. It flourishes for a while everywhere, and having

exhausted fishing in one locality, it is shifted to another. Fishing from morning till night and from night till morning, in season and out of season, and all through every season, for all kinds of sizes of fish, it abates not its ravages for any cause but exhaustion. This is substantially the account given of its working in the United States by the late Prof. Baird and the late Mr. Milner—two able officials of the Federal Government.

In Canada, out of consideration for the relative position of our fishermen living on the lakes where pound-nets are in common use by their American neighbours, and the unequal position in which they are placed, both as regards the time and modes of fishing, as compared with the unrestricted fishing carried on in the United States waters within their sight; and in which fishermen are permitted to take fish, at all times and by all means, their use had to be permitted under special regulations and subject to a heavy license fee.

Section 1, subsection 3 of the Fisheries Act, respecting gill-nets for catching salmon-trout or whitefish, provides that they shall have meshes of at least 5 inch extension measure.

Subsection 4 provides that *seines* for catching whitefish shall have meshes of not less than 4 inches extension measure.

Subsection 2 provides, that the *fry* of the whitefish shall not be at any time destroyed.

In 1890, Mr. C. Wilmot reported upon gill-net fishing.

Mr. Wilmot was an officer of ten years' experience in handling breeding fish, collecting fish-eggs, and observing the operation of pound and gill-nets.

Respecting gill-nets, he wrote:—

1. At the present time a great deal of dissatisfaction exists among wholesale dealers and their customers, owing to the fish not being in a sound condition for food, especially when arriving at destinations long distances from the fishing grounds. The cause of this, in my opinion, is largely due to the use of the gill-net. The present system of operating the gill-net by the ordinary run of fishermen is to have from two to four gangs set in different localities; these are lifted alternately, usually remaining in the water from three to four days, but in case of rough weather the fishermen cannot reach them, and the fish are not removed for a much longer period. The result is that a large proportion of the fish, when taken from the net, are in a somewhat decomposed state, and it stands to reason that their condition will not be improved by the time they arrive at the important fish markets, such as Toronto and Buffalo, to be sold to the retail dealers of Canada and the United States, after having been kept for a week or more. It is well known that a large percentage of the fish taken by the gill-nets are unfit to be shipped fresh.

App. No. 6,
Fisheries
Report, 1891.

* * * * *

I am of the opinion that the gill-net is much more destructive than the pound-net, and its use as at present practised must eventually exterminate the salmon-trout and whitefish.

2. During the close time of thirty days in November, the salmon-trout and whitefish frequent the shallow waters, where gravelly bottoms are to be found, for the purpose of spawning; here they are more easily caught than in the deeper waters in the open season. The construction of the gill-net is specially adapted for the destruction of the parent fish in these localities; it can be used illegally by fishermen, without even a buoy to mark its location. It is therefore impossible for the most energetic fishery officers, having as they do districts under their charge extending over limits a hundred miles or more, to enforce the law. It is at this season of the year that so much harm is done to the fisheries by these illegal fishermen, who fish in a wholesale manner, and either salt the fish, or sell them to other parties having facilities for freezing

them, and then after the close time is passed, they are disposed of as marketable fish which were captured in the open season. And he recommended:

3. The large amount of money invested in gill-net fishing by virtue of the numerous licenses which are granted from year to year, renders it almost impossible to adopt immediate steps to abolish this system, even if the department felt inclined; but in my opinion the number of licenses should be gradually reduced, and, finally, none granted for gill-net fishing later in the fall than 15th October, as this is the time of the year when the salmon-trout and whitefish leave their feeding grounds, and seek their breeding grounds for spawning purposes.

Mr. C. Wilmot in 1891 again reported as follows:—

App. No. 6,
Fisheries
Report, 1890.

1. In the vicinity of Goderich, Kincardine, Southampton and other important localities where gill-net licenses were extensively granted in past years, the fish are almost exterminated, and the large capital invested in fishing enterprises at these points has been withdrawn, to be utilized in new fields of operation.

By means of the gill-net, fishing is carried on in a very extensive way; and to give an idea of its magnitude I may cite the case of the Georgian Bay, where parties holding tug and fishing boat licenses, the Indians and persons fishing without the lawful right to do so, have yearly upwards of 1,000 miles of gill-nets in use, or almost enough net set to encircle those waters twice. Even if the nets were set, as above described, they would not be nearly so injurious as when placed upon the feeding and spawning grounds of the fish in every possible shape and form; and to make matters still worse, large numbers of these nets are cast adrift from their buoys by storms never to be found again by the owners, but their construction is such that portions of them continue gilling and destroying the fish, and polluting the waters for many months after they have been lost. This, in my opinion, is one of the great evils of this system, and requires the most careful consideration upon the part of the Fisheries Department, in order to have it properly remedied.

At a Conference of Fishery Inspectors held at Ottawa, 9th April, 1891, the following views were expressed:

14. POUND-NET vs. GILL-NET FISHING.

Report of the Fresh-Water Fish Committee.

Fisheries
Report, 1891,
lxix.

"Your committee, after listening carefully to the reading of Mr. Charles Wilmot's report upon the question of pound-net vs. gill-net fishing (see p. 85, Fisheries Report, 1890); from personal experience in the matter, and after a full discussion upon the relative merits of these appliances, recommend as follows:—

(1.) "That a pound-net of proper dimensions—say 4 inch mesh for the pot, 6 inches for the leader—is not so destructive as the present system of operating gill-nets.

(2.) "The pound-net is a stationary engine, whereas the gill-net can easily be removed from feeding to spawning grounds, and by this means seriously interfere with natural propagation. The fish when taken from the pound-net are alive and in first-class condition, whereas with the gill-net they are often from necessity left in the water too long and thus become unfit for use.

"The gill-net captures large numbers of immature salmon trout by the teeth; but the pound allows them to pass through uninjured.

"The gill-net allows suckers and mullets to pass through the mesh, whereas large numbers of these inferior fish are caught by the pound-nets."

NOTE.—Suckers and mullet live largely upon the eggs and fry of whitefish and salmon-trout.

Recommendations.

(a.) Your committee would recommend that a limited number of pound-net licenses be granted to the fishermen of the province of Ontario. The mesh not to be less than 4 inches extension measure in the pot, pound, hearts or tunnel, and 6 inches in the leaders.

(b.) For Manitoba and the North-west Territories, where the adult and marketable fish are larger, the mesh for pot, pound, heart, or tunnel should not be less than $4\frac{1}{2}$ inches and 7 inches for the leader.

(c.) That the number of licenses issued, and the localities where the nets are to be placed be left to the discretion of the inspectors of the respective districts.

(d.) That pound-nets be not placed nearer than a mile from each other, that the length of leaders for each net be fixed by the inspector, and that no double-headed pound-nets be allowed.

(e.) That gill-net fishermen operating in the province of Ontario from 3,000 to 6,000 yards of net shall pay an annual fee of \$10, and for a less quantity a fee of \$5, and that the license for fishing tugs remain as at present, viz., \$25.

(f.) That the fee on a boat license in the province of Manitoba and the North-west Territories (the limit to be placed at 6,000 yards) shall be \$10. The fee on licenses for fishermen using 400 yards or less of nets to be \$2 per annum, and for each additional \$400 yards \$2 more.

(g.) That Indians (fishermen) in Manitoba and the North-west Territories shall have no privileges over and above those granted to white-men, when fishing for market.

(h.) The committee also recommends that a system of registering fishing nets, buoys, and boats be adopted, and that the Department of Fisheries issue tags or checks to the inspectors for that purpose. That no fisherman fishing with gill-nets in Ontario, Manitoba and the North-west Territories, be granted a license to use pound-nets. He must restrict himself to either of these methods for capturing salmon-trout and whitefish.

Mr. Dunning, President of the Wisconsin Fish Commission, writing to Mr. F. J. Amsden, Secretary, &c., Rochester, N.Y., from Madison, Wis., November 2nd, 1891, said, in reply to the following question:—

2nd. "What kind of nets should be permitted—pound or gill? The laws of Wisconsin, and a change in which I see no reason at this moment, are as follows:—

"Section 1. It shall be unlawful after the passage of this Act, for any person, for himself or for others, to set, in the waters of Lake Superior or any bays thereof being within the boundaries of this state, any trap, fike, float, net or seine whose mesh is less than three and one-half inches stretch measure, or one and three-quarters inches bar measure, or any pound-net, the back and two opposite sides of the pot hereof whose mesh is less than three and one-half inches stretch measure, or one and three-quarter inches bar measure."

A. D. Stewart, Secretary of the Ontario Game and Fish Commission 1892, said:—

"Our Commissioners very strongly pronounce against the pound-net. The destruction of fish, gentlemen, in the waters of Ontario is something enormous, and I tell you that thousands and thousands of tons of good fish and good spawn have been allowed to rot along our shores. We think that the pound-nets are a source of great destruction, and we are endeavouring, so far as possible, to put a stop to them."

At a meeting of the International Fish Committee held in Rochester, November 10th, 1891, at the rooms of the Chamber of Commerce, the following was reported:—

* * * * *

Ontario Game and Fish Commission, 1892, page 239.

Ontario Game and Fish Commission, 1892, page 242.

Ontario Game
and Fish Com-
mission, 1892,
page 253.

CHAIRMAN.—The Chair would like to ask of Mr. Green something in regard to the proper size of mesh for nets in the lakes. You have been a practical fisherman?

Mr. GREEN.—I have.

CHAIRMAN.—What is your idea of a proper size of mesh for nets—pound-nets and gill-nets in the lakes?

Mr. GREEN.—I do not think that in gill-nets a smaller mesh should be used than 2½-inch bar.

CHAIRMAN.—Two and one-half bar, that makes a 5-inch.

Mr. GREEN.—Yes; the average size, then, is three pounds or over. The smaller fish go through. In regard to the pound-net, if you have a large mesh a great many fish would be killed. A pound-net will clean out any stream, I do not care where it is; if they took the pains to separate them, took out the small fish and put them back, which the fishermen will not do. I have seen boat loads taken in, and a third of them would not be marketable.

CHAIRMAN.—Which is most destructive to fishing, pound or gill-nets?

Mr. GREEN.—I think a pound-net is. If a gill-net is restricted to a proper sized mesh, the small ones will go through; and a pound-net takes from a six-inch up to a sturgeon.

A proposed code was discussed:—It was section 132 of the Act for the protection and preservation of birds and game:

Lake Ontario, Lake Erie and Niagara River, fishing with nets within certain distances from shore prohibited. No fish shall be fished for, caught or killed in any manner or by any device except angling in the waters of Lake Erie, within one mile of the shores, or within one-half mile of the shore of any of the islands therein. Nor in Lake Ontario within one mile of the shore, or within one mile of the shore of any of the islands therein, except in the county of Oswego they may be taken one-half mile from shore. Nor shall fish taken contrary to the provisions of this section be knowingly possessed. *Pound-net fishing* in the waters of Lake Erie is hereby prohibited.

The committee appointed by the conference of representatives from the respective commissions of Canada and the state of New York, to consider and recommend measures looking to the adoption of uniform laws for the protection, preservation and multiplication of the food fish supply of the international waters lying between these respective countries reported:—That the food fish supply of the great lakes has been for the past thirty years suffering rapid diminution, is too apparent to need statistical proof. On the New York side of Lake Ontario, where formerly salmon-trout, whitefish and even the lordly salt water salmon were so abundant as to furnish all the near markets with an abundant supply at prices within the reach of the means of the day labourer, the product now scarcely recompenses the netter, and these fish, once so abundant and cheap, are no longer available for food to the multitude, but have become table luxuries to be enjoyed only by people of ample means. On the Ohio side of Lake Erie, there has been a nearly equal falling off of the higher grades of fish, but there still remains, on account of the greater fecundity of the coarser kinds, a fair supply of what are commonly known as pickerel, blue pike, pike perch, and bass, which still afford a fair market stock at moderate cost. Yet so enormous has become the draught on the north shore and islands of Erie, that the cry of scarcity is already sounded from there.

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Page 271.

On the Canada side of these waters, the supply, though showing each year an additional falling off, yet holds goods for profitable netting, and it is from the fisheries of Canadian waters that the principal market supply for the state of New York comes.

* * * * *

Ontario Game
and Fish Com-
mission, 1892,
page 260.

Ontario Game
and Fish Com-
mission, page
270.

THE REMEDY.

Of the unnecessary causes of depletion, it is evident from observation and experience, that the practice of inshore netting is the greatest. The setting of pound-nets of small mesh with leads extending often a mile or more from shore, causes the capture of myriads of young fish scarcely fit for human food, but which, if left to develop on their natural feeding grounds would add immensely to keeping up the market supply; and the innumerable fikes, trap and hoop-nets, and other effective devices for the capture of coarse and immature fish which seek their food in the shallows and along the shores, is another of the leading causes of depletion. The use of small mesh gill-nets is also a source of material waste. The small fish taken in these nets are but of little value for food, and are a nuisance to the market men on whose hands they are thrown.

The remedy for the cure of the ills stated, is to prohibit the use of nets of any kind, within one mile of the shore line of the great lakes and the rivers connecting them and the St. Lawrence River, and to require that the mesh of all pound and gill-nets set outside this limit, shall be not less than three and one-half inches stretch, and as an effective aid to the enforcement of such a regulation, to make illegal the sale or possession of any fish of less than specified weights.

Mr. Nevin, Superintendent of Fisheries for State of Wisconsin, writes: Ontario Game and Fish Commission, page 275.

MADISON, WIS., Dec. 7, 1891.

To A. D. Stewart, Esq., Secretary Joint Convention, Hamilton, Ont. :

* * * *

"The greatest evil that exists to-day in the matter of replenishing the waters of the various lakes with whitefish is the pound-nets; for the simple reason that they catch both large and small. As long as the pound-nets are allowed to remain in the waters in their present form, there is no use in attempting to replenish the waters with whitefish."

* * * *

"You can regulate the matter by having a four and one-half inch mesh, so that all the small whitefish will pass through. If the fishermen had to depend for their living upon what whitefish they catch they would starve."

* * * *

From the Indian Agent at St. Peter's, Manitoba, written in 1891:—
"While the pound and trap-nets were allowed, the whole shore of the lake was strewn with dead fish; now, when their use is not allowed, no dead fish are to be seen; still some persons argue that this kind of net is not destructive."

On the destruction of immature fish, Inspector Elliott says:—

"The catching of small whitefish in pound-nets and seines is one of the greatest evils now existing. These nets being shore machines as it were, and as these small fish follow the shore in schools, large numbers of them are caught. At one station alone this season, 22 tons of these fish (classed as seconds) were handled, and buyers inform me there is no profit in them; but competition is now so keen in buying that fishermen say if you do not buy our small fish, you cannot have the large ones, and buyers are compelled to take them in order to hold their trade. The catching of those immature fish is greatly to be regretted. If fish are caught so young that they cannot spawn or reproduce their species it will soon exhaust the supply. There are very few pound-nets in my division that have meshes of the proper size, and even if they had it would not prevent the catching of those small fish, as fishermen have now too many devices to catch them even if the mesh were of the proper dimension."

A conference of United States, state, and Canadian Fish Commissioners was held at Detroit, in December, 1892.

(See Canadian Fishery Report, 1892.)

The following was the report of a sub-committee:—

“GENTLEMEN,—Your committee, to whom was referred the question, ‘whether or not there should be a close season for whitefish, lake or salmon-trout and herring,’ also what means should be taken for their protection, would report:

“1st. All small fish and those unfit for food of all kinds when taken in nets, should be replaced in the water where taken alive, and that fishermen should not be allowed to take such fish on shore, nor expose them for sale.

“2nd. That no string pound of nets used in the lakes shall extend more than four miles from shore.

“3rd. That one-half part of all channels between islands or elsewhere where fish migrate to spawn, shall be kept free from nets of all kinds at all seasons.

“4th. That all whitefish taken of less than sixteen inches in length, and all salmon-trout less than two pounds in weight shall be immediately returned to the waters where taken and shall not be exposed for sale. That all herring less than eight inches in length, and all wall-eyed pike less than twelve inches in length, shall be returned to the waters where taken and shall not be exposed for sale.

“5th. That the month of November in each year be made a close season in all the great lakes for whitefish, herring and salmon or lake trout.

“Your committee would further recommend that all penalties fixed for violations of any laws that shall be enacted shall be made not only to apply to those who take fish, but also to all persons who buy, sell, transport or have the same in possession.

“The 1st, 2nd, 3rd and 4th recommendations were unanimously adopted by your committee.

“The fifth recommendation, making the month of November in each year a close season for whitefish, salmon-trout and herring was adopted, all the members voting ‘aye’ except Mr. Keyes, from Ohio, who voted in the negative.

“Resolved,—That the law should authorize the seizure and destruction of nets used in violation of law.”

Mr. AMSDEN.—Was any consideration taken of the size of mesh in gill-nets?

Mr. BOWMAN.—No, that was not considered. No recommendation was made to the committee in that regard at all.

Dr. SWEENEY.—I move its adoption.

Mr. GOULD.—I will second it.

The resolution as amended was then unanimously adopted.

On this 20th day of February, 1892, the following Order in Council was adopted:

Whereas pound-net fishing should be confined within as reasonable bounds as possible, and the mesh of this description of fishing apparatus should be fixed in such a manner as to allow the escape of young and immature fishes, and prevent the waste and destruction which are now going on,—

His Excellency, in virtue of the powers vested in him by “The Fisheries Act,” chapter 95 of the Revised Statutes, and by and with the advice of the Queen’s Privy Council for Canada, is pleased to make the following Fishery Regulations, which shall apply to all pound-net fishing in the fresh waters of the several provinces of the Dominion, excepting Manitoba and the North-west Territories, where regulations already exist.

REGULATIONS.

Pound-net Fishing.

1. No person, company, or firm shall fish with a pound-net without having first obtained a license.

2. The pounds, pots, bowls, hearts or tunnels of pound-nets shall be at least 4 inches in extension, and the leaders at least 6 inches in extension; and nothing shall be done to practically diminish their size.

3. The use of double headed pound-nets is prohibited.

4. The fee payable for each pound-net license shall be \$50.00.

5. Licenses for pound-nets shall be issued to resident British subjects only, and who are the actual owners of the fishing gear included in such license. The applicant shall also describe in his application the locality, the size of net, length of leader, the description of boat or boats to be used, and the kinds of fish proposed to be caught.

6. All nets, materials, implements or appliances used, and all fish caught, taken or killed in violation of the regulations shall be seized and confiscated, and any person or persons violating these regulations shall incur the penalties provided by the Fisheries Act.

7. The pots, pounds, bowls, hearts or tunnels of pound-nets shall be so raised, opened or adapted as to admit of the free passage of fish through, by, or out, of the same from 6 o'clock on every Saturday afternoon to 6 o'clock on each following Monday forenoon; and during such close time, no one shall catch fish by any means whatever, nor shall the pound-nets be used or worked in such manner as to catch or kill any description of fish during the annual close seasons which have been or may be set aside by the Fisheries Act or regulations under it, but if any such fish are unintentionally captured in such net during such close seasons, they shall be liberated immediately thereafter, and any fish so taken, caught or killed and not liberated during the aforesaid "close times" together with the nets or other apparatus used shall be forfeited.

8. No company, firm, trader or person shall use, or be licensed to use, more than five pound-nets.

9. For the information of persons obtaining pound-net licenses under these regulations every license shall have the regulations printed thereon, or appended thereto.

10. These regulations shall apply to the pound-net fishing in all the fresh waters within the Dominion of Canada, except those within the provinces of Manitoba and the North-west Territories.

11. No pound-nets shall be placed at a nearer distance than one mile apart, and the length of leaders to each pound-net shall be determined by a Fishery Officer.

12. The above regulations shall come into force on the 1st day of January, 1893.

By a subsequent Order in Council, action upon this was suspended, pending the report of the Ontario Commission of Inquiry.

The following notice was issued by this department in April, 1893:—

"The following in relation to Net Fishing in 1894 and thereafter will be enforced in all cases:—

" Pound-nets.

"For fishing salmon-trout and whitefish the meshes of the pots shall not be less than $4\frac{1}{2}$ inches.

"For fishing herring and pickerel and other coarse fish, the meshes of the pots shall not be less than $3\frac{1}{2}$ inches; and the meshes of the hearts, tunnels and leaders in both cases shall not be less than 6 inches, in all cases extension measure. No double pound-nets allowed.

" Gill-nets.

"For fishing salmon-trout or whitefish, the meshes to be not less than 5 inches. When fishing for herring, pickerel and other coarse fishes, not less than $3\frac{1}{2}$ inches, all extension measure.

" Seines.

"When permitted to fish for herring, siscowet, pickerel and other coarse fish, shall have meshes in all cases not less than $3\frac{1}{2}$ inches extension measure, and the measurement of the meshes in all of the above mentioned nets shall not be reduced by any device whatever, and shall hold the full measurement when wet or in use fishing.

When the discussion arose regarding size of mesh for pound and gill-nets, some of the Erie fishermen had expressed their views as to the size of meshes and certain members of Parliament represented on behalf of the fishermen that the fishermen would be content with a 3 or $3\frac{1}{8}$ in. mesh, should any change be made by the department from the small 1 and 2 inch mesh in use, which by the evidence was shown to be very destructive to small and immature fish:

At the same time an article appeared in the press to the effect that a meeting of fishermen, and dealers held either at Buffalo, or Erie, they have declared in favour of a $3\frac{1}{8}$ -inch mesh as the proper size to take marketable fish—that less than $3\frac{1}{8}$ inches took fish of an unmarketable size.

Upon this information, and the conclusion of the Erie (U. S.) Fishermen, and from the evidence taken from fishermen and others by the Commission, the $3\frac{1}{8}$ inch mesh was inserted in the notice of the 13th April last, regarding the size of mesh to be called for in 1894 for pound and gill-nets.

It may be mentioned that, a regulation establishing a $3\frac{1}{8}$ inch mesh, would, as heretofore, be construed as meaning a net as obtained from the factory or seller of nets. This $3\frac{1}{8}$ inch mesh when in use in the water would become a 3-inch mesh by reason of shrinkage. This would be sure to be the case with the pound-net twine, as it is always larger than gill-net twine, and being larger would contract more, hence the provision made in the circular that “the measurement of the mesh should hold good when in use, fishing.”

In all cases when a mesh size is established by regulations, it should be laid down at $\frac{1}{8}$ or $\frac{1}{16}$ in gill-nets more than the actual size; and with pound-net meshes, the twine being very much larger and the shrinkage greater, fully $\frac{1}{2}$ inch should be added to the size of mesh as bought at the factories or from those furnishing nets. A gill-net of $3\frac{1}{8}$ -inch mesh, when dry, will be only 3 inches when fishing; a pound-net mesh of $3\frac{1}{8}$ -inch mesh, when dry, will be 3 inches when wet and fishing.

THE PRESERVATION OF FISHERIES.

There seems to be hardly room for argument touching the necessity for close seasons and other regulations in order to preserve fisheries.

The following references are in point:

It will be seen that expert authority favours reduction even upon the fisheries of coastal waters and the deep-sea.

Evidence of Mr. F. Buckland Fishery Insp. before a committee of the British House of Commons on the Fresh Water fish protection Bill.

Extract of Mr. Buckland's report on the salmon fisheries of Norfolk.

“Spare the fathers and mothers who are the breeders. How can you have any children if you do not. That is my simple principle; that is the principle of all cultivation of birds, beasts, or fishes; it is the principle of the salmon laws; and under Mr. Dillwyn's Act, of 1873, these fisheries are growing up gently, nicely, prettily, because we preserve the young and the old ones.”

“Three points, therefore, naturally occur to the fish culturist as necessary for the cultivation of the magnificent fish farm of the broads. These points are, 1st, annual close time; 2nd, mesh of nets; 3rd, the regulation of other fishing engines. The engines principally used in the Norfolk Broad are drag-nets, bow-nets, eel-nets, and flue-nets; and what may be called floating fixed engines, viz., liggers, or trimmers, and night lines; these liggers are of two kinds, viz., drifting and anchored. The drifting liggers are more destructive to pike.

“Wishing to have a consultation with the proprietors of the Broad, and the anglers, both rich and poor, directly interested in the Broad, I requested that they would be good enough to meet me in consultation. At Norwich, Mr. F. Sutton, of Norwich, was kind enough to arrange this meeting which was attended by many proprietors of Broad, including Mr. R. H. Blake Humfrey, Mr. A. J. N. Chamberlain, the Rev. T. J. Blofield, Mr. Gurney Buxton (ex-Mayor of Norwich), and many other gentlemen. The meeting was presided over by J. J. Coleman,

M.P., and Mr. C. S. Read, M.P. At this meeting the following resolutions were proposed, seconded and passed :—

1. That the legislation for the preservation of the navigable portions of the Rivers Wensum, Yare, Bure, and Waveney, and their affluents, is urgently required in the public interest.

2. That it is also the opinion of this meeting that such legislation should extend to the Broads connected with such rivers and their affluents, so far at least as to secure a close time during the spawning season.

-3. That upon the navigable waters all netting be prohibited except as respects eels and smelts, and then only under special restrictions.

4. That it is not desirable to enact fence months against angling.

5. That upon the Broads and spawning places, and the waters connecting them with the navigable rivers, all netting shall be prohibited absolutely between the 25th day of March and the 25th day of June.

It will of course be expected in this place that I gave my opinion on these resolutions.

I agree with—

A. The desirability of protection by law.

B. The desirability of an annual close time.

I have come to the conclusion that should the legislature determine on passing any law affecting the fresh water fisheries of Norfolk and Suffolk, the carrying out of its details in the form of by-laws, such as annual close time, regulation of mesh of net, use of liggers, &c., should be entrusted to a Local Board of Conservators." ** "If legislation based upon the outlines above laid out were enacted, I am of opinion that the fisheries of the Broads and rivers of Norfolk would, in a comparatively short time, increase to a very large extent, to the benefit of the riparian proprietors, and the public generally; while at the same time sport for anglers of London and its vicinity, as well as those of the large inland manufacturing districts, would be greatly increased." ** "In conclusion, I have to advise the Home Secretary that it is, in my opinion, expedient that the rivers and Broads of Norfolk and Suffolk, as above described, should be 'placed under regulations adapted to prevent their being wasted, and to preserve them for the future.' These regulations should be as follows :—

1. "That a Board of Conservators should be constituted for the management and regulation of the fisheries of the rivers and Broads of Norfolk and Suffolk. This board should have power to make by-laws subject to the approval of the Secretary of State at the Home Office.

2. That there should be an annual close time for all fish frequenting these Broads and rivers.

3. That this annual close time shall commence on the 1st of March and terminate at midnight on the 31st of May.

4. That the annual close time shall apply equally to private and to public waters.

5. That no close time for rod or line is required.

6. That for the present it is advisable to enact the annual close time only. Power, however, should be given to the Board of Conservators to pass by-laws, subject to the approval of the Home Office, as to the regulations of mesh of net, and use of liggers, cutting of weeds, &c.

7. That trawling in the rivers (see Lowestoft case, page 33), should absolutely be prohibited."

"With regard to the present position of fixed nets generally, it is believed that, while it would not be expedient entirely to abolish them, as some have proposed, it would certainly be advisable to regulate and restrict them. There are at this moment more than 200 proprietors of salmon fishings on the sea coasts of Scotland worked by means of fixed

Extract from
Report of
Special Com-
missioners ap-
pointed to in-
quire into the

effect of recent legislation on the Salmon Fisheries of Scotland, 1871, pages 14-15.

nets, which provide for the market a large and steady supply of salmon in the best possible condition, and fetching, in consequence of their higher condition, a larger price than salmon caught in fresh water. It is plainly, therefore, not for the interest of the public—though it may be for that of the river proprietors, that this large and steady supply of wholesome and nutritious article of food should be stopped; and it is in vain to suppose that the increase in the river fisheries would ever compensate, either in quantity or quality, for the loss of the salmon supply that would inevitably result from the total suppression of fixed engines. But while this is true, it is at the same time undeniable that, in many cases, the existing by-laws allow stake and bag-nets to be placed much too close to the mouths of rivers, in some instances within 400, 300, 200 and even 150 yards of the middle of the channel where the river joins the sea. Fixed nets in such positions are most injurious to the fisheries, and most unfair to the upper proprietors. We consider, therefore, 1st, That no stake or bag-nets should be allowed within half a mile of the mouth of any river; and that in some cases it would be advisable to remove them to a distance of two miles; but the distance to which they should be removed would depend very much on the size of the river and the configuration of the coast; 2nd, That no fixed engines should be permitted between the mouths of rivers that fall into the sea so close to each other as the Ayr and Doon, in Ayrshire, and the Dee and Don, in Aberdeenshire; 3rd, That there should likewise be some restriction of the number of stake or bag-nets allowed along a certain stretch of coast. At present a single bay sometimes contains 40 or 50 such nets, and these are frequently joined so as to form a continuous wall of netting extending seaward, from high water mark, for 1,500 feet; 4th, That the junction of stake and bag-nets should be prohibited. Stake-nets should be allowed on the shallow shores to which they are suitable, and bag-nets on the steep rocky coasts, where the depth of water prevents the use of stake-nets; but two or three bag-nets stretched out into deep water beyond the end of a stake-net which occupies the whole space between high and low water mark should be prohibited; 5th, That the number, position and extent of the existing fixed engines should be officially registered, and that no addition to their number should be permitted without the consent of the Secretary of State."

Report of the Select Committee appointed by the Imperial Parliament, to consider the expediency of adopting measures for the preservation and improvement of the sea fisheries in the seas around the British Islands, including the prohibition of the capture, landing or sale of undersized sea-fish, &c., page III.

Size limits.

"The Committee desire, however, to place it on record, that a Committee of the House of Commons, not an altogether satisfactory tribunal to take evidence with regard to the grievances and wants of fishermen, so far as the evidence of the fishermen themselves is concerned. This is partly on account of the fact that the time at which Parliamentary Committees sit is exactly that at which fishery operations are carried on most conveniently, and with the greatest amount of success; and partly because a Parliamentary Committee necessarily requires all witnesses to attend at Westminster, a source both of expense in the conduct of the inquiry and of inconvenience to the fishermen themselves. Your Committee would therefore suggest that, if further information should appear to be desirable, it might be well that this inquiry should be supplemented by the appointment of small Departmental Committees which, by visiting various fishing centres around the coast, would give full scope to fishermen to bring forward any suggestions or grievances which they may have.

"The principal remedy which has been suggested to your Committee for this state of things, is the enactment of a law forbidding the landing and sale of flat fish below a certain limit of size; and a principal reason given in support of this proposal is a belief that, by the enforcement of a size limit with regard to sale and landing, trawlers would avoid those fishing grounds on which such small fish are mostly captured, owing to the fact that it would not be worth their while to take fish which it would be impossible for them to sell.

The prohibition of the capture of these fish is not suggested and, indeed, is admitted on all hands to be impossible.

Size limits have already been adopted by Belgium, Denmark and France; though in the case of these countries, the limit is a very small one, namely, in the case of Belgium, for plaice $7\frac{1}{2}$ inches, for soles $7\frac{1}{2}$ inches, for turbot 10 inches, for brill 10 inches, from the point of the nose to the tip of the tail. In the case of Denmark, 8 inches for plaice and 8 inches for turbot, from the point of the nose to the root of the tail. In the case of France, for plaice $5\frac{1}{2}$ inches, for soles $5\frac{1}{2}$ inches from eye to root of tail.

Two limits of size have been suggested to your Committee for such an enactment, one by the National Sea Fisheries Protection Association, which is for brill, 12 inches; for lemon soles, 11 inches; for plaice, 10 inches; for soles, 10 inches; and for turbot, 12 inches; the second, somewhat higher, by the scientific experts of the Maritime Biological Association, founded on the sizes at which the various fishes come to sexual maturity, which, so far as the North Sea is concerned, appear to be 17 inches for plaice; 12 inches for soles; 18 inches for turbot; 15 inches for brill; and 12 inches for lemon soles. These experts, do not, however, recommend that quite so high a limit as that of sexual maturity should be adopted.

Your Committee are unable to recommend either of these limits; they consider that, while it might be desirable to forbid the sale of small flat fish, the adoption of the sizes suggested would involve great hardship to many of the poorer fishermen who fish near the shore in the smaller class of boats.

Suggested size limits impracticable. A smaller limit proposed by Committee.

"They are of opinion that the size limit, below which the sale of small flat fish should be prohibited, should approximate to that already adopted by foreign countries; and they would suggest a limit of eight inches in extreme length for soles and plaice, and ten inches for turbot and brill. They also consider that a strong effort should be made to secure the adoption of uniform regulations for limits of size and other matters by all the nations interested in the North Sea fisheries."

Your committee are sensible of the difficulties of making international regulations, but are nevertheless of opinion that the best method for effectively governing the operations of the various classes of fishermen, and, at the same time, for securing, so far as it may be found possible, the proper protection of spawning and immature fish, would be to throw the responsibility of these duties, so far as the waters immediately adjacent to the various countries are concerned, on those various countries; that, for the effective realization of the object, the present territorial limits of three miles is insufficient, and that, for fishery purposes alone, this limit should be extended, provided such extension can be effected upon an international basis, and with due regard to the rights and interests of all nations. Your committee would earnestly recommend that a proposition on these lines should be submitted to an international conference of the powers who border on the North Sea.

The importance throughout the United Kingdom of greater facilities of transit for fish from outlying districts to centres of population and for telegraphic communication between those centres and the outlying districts, has been made very apparent. Your committee strongly urge that these questions should be favourably considered by the Board of Trade and other departments of the Government before whom they may from time to time be brought, and would especially insist that powers be given to the post office to extend telegraphic facilities where it is desirable, on easier terms than can under existing arrangements be granted.

Facilities for transit of fish to centres of population; telegraphic communication.

Extracts from
evidence given
before the
Committee.

A table was handed in by Mr. John Wrench Towse, Honorary Secretary of the National Sea Fisheries Protection Association, which gives the limit of the size of fish allowed to be sold in Belgium, Denmark and France :—

Fish.	Saleable Minimum (Approximate).		
	Belgium.	Denmark.	France.
	Extreme length—in.	Nose to root of tail—in.	Eye to root of tail—in.
Bream.			5½
Cod.	10	8	
Flounder.			6½
Mullet.			5½
Plaice.	7½	8	5½
Shad.			5½
Sole.	7½		5½
Sturgeon.			5½
Turbot.	10	8	
Whiting.	7½	8	
Brill.	10		
Ray.	10		
Hallibut.	10		
Haddock.	10		
Dab.	7½		

The committee desiring to ascertain how far these regulations were being carried out, questioned the Chief Fishery Inspector of England and Wales on the subject.

CHAIRMAN OF COMMITTEE—

Evidence of
Mr. Arthur
Davies, Ber-
rington, As-
sistant Secre-
tary of Board
of Trade, Lon-
don, and Chief
Inspector of
Fisheries of
England and
Wales.

2448. Can you tell me anything about how far they enforce these regulations?—I have been making inquiries. I have not yet received all my answers. As regards Denmark, I am assured, and I am convinced in my own mind, that their regulations are carried out. With regard to Germany: Prussia and the Hanse Towns have some regulations of that kind, and I wrote to a friend who was connected with fisheries at Berlin, I have had a reply from him, saying that the regulations are carried out and that attention is very frequently drawn to them in the press, so that the matter is kept before the people there. With regard to France, my correspondent, I am sorry to say, is away from home, and I have not had an answer from him, but, judging from their usual mode of dealing with those things, I should think that probably the regulations are carried out. They are under a comparatively old act, and not anything very recent. With regard to Belgium, I have not yet received an answer to my letter, but about two months ago, my colleague, Mr. Mallan, met probably the best authority in Belgium, and had a conversation with him on the subject, and he said that the law was being carried out; that they had had some slight trouble at the first, but that afterwards they had no further trouble, that is as regards this particular law, as to the sale of undersized fish. From Holland, I have had a good deal of information, but I pressed for an answer on the point as to whether they did really prosecute any body, and I have had a telegram this morning from Amsterdam saying, yes, they do, and the particulars are on their way.

2449. Perhaps you might be able to let us have those later on if you get them?—If you please.

2450. May I suggest to you this general question; do you, from the information that comes to you, consider that the fisheries in the North Sea for flat fish are deteriorating?—I have no doubt of it. Boats go so very much further away to catch fish than they used to; they cannot get the same quantity that they used to near home.

2945. I think you can now rather supplement the evidence you gave three weeks ago on the subject of the enforcement of the law with regard to the capture and sale of immature fish in foreign countries, can you not?—Yes, I have had answers to nearly all my inquiries now. I have already stated that in Denmark and Prussia the existing law is carried out.

2946. Can you tell us how? By what body is it enforced?—I do not know in Germany; but in Denmark it is under the supervision at any rate, of Captain Drechsel, who is the head of the Fishery Department.

2497. Have they a special police for the purpose?—No, I imagine not. I have no definite information, but the Act is strictly carried out and persons who infringe it are prosecuted, so I am informed.

3170. Then so far as Scotland is concerned, you would rather be against any prohibition of the sale, capture, or landing of immature fish, would you?—I would not be against it except for the reasons which I think will be convincing almost to the committee. We cannot capture the mature fish without catching these small fish; we have killed them, we have destroyed them for any future usefulness, and if they are of any value to land and sell for food, I think it would be a great pity to prevent that being done, because that would only aggravate the evil. If it were possible to return them to the sea alive, or to any way preserve them in any large proportions, then I should say that ought to be done, but if we take into account the difficulties of the different spawning seasons and that mature fish are found occasionally in ground where there is immature fish the difficulties increase upon us. Therefore, in place of that I would rather be disposed to say that if there are localities where large quantities of immature fish are swarming, and where the number of mature fish are not so very considerable, it would be more effective to keep the fishermen, especially the trawl fishermen, off that ground altogether, than deal with them in detail after they have caught the fish.

Extract from the evidence of Mr. Esslemont, Chairman of the Scotch Fishery Board.

4387. I would also agree with Captain Dannevig in saying that the hatching of fish should go hand-in-hand with the restriction and prohibition of certain other matters. I also would second entirely his statement as to the rearing of fish as well as hatching them. To hatch alone is only half the difficulty, but to hatch and rear until the critical stages have been passed is in my opinion most valuable.

Extract from the evidence of Mr. W. L. Calderwood, page, 214.

Extract from the general statement showing the results of over-fishing and necessity for the protection and development of fisheries. Referring to the experiments of the Garland, in beam trawling, the following information appears:—Page 10.

Extract from the Eleventh Annual Report of the Fishery Board for Scotland, being for the year 1892.

“As has been said, a certain and indefinite amount of natural fluctuation, due to variations in the conditions of the weather, &c., must be taken into account in considering these trawling statistics. But it is improbable that this is the principal explanation of the gradual and considerable decline in the abundance of the food fishes which the figures disclose. And it must be borne in mind that these figures refer to nearly 150,000 fishes, captured in about 700 hauls of the net on the same grounds. It would rather appear that the collective results of the Garland's observations point to general over-fishing, especially as was indicated in last years report, in the extra territorial waters where the food fishes mostly spawn; and thus the normal supply of floating fish eggs and larval fishes does not reach the inshore grounds. It is a noteworthy circumstance that although the prohibition of beam trawling in

territorial waters must have served to protect immature plaice more than the young of other fishes (owing to their very special distribution) this fish is diminishing in abundance year by year.

Over-fishing of the Sea, and its Remedies.

(Extract taken from same report, page 12.)

"The falling off in the relative abundance of certain of the food fishes, especially in the waters near the shore, when compared with the increase in the means of capture, is not confined to the east coast of Scotland. In England, Norway, Denmark, Belgium, Holland, France, Spain, Canada, Newfoundland,—indeed, wherever sea-fisheries are prosecuted on a large scale—similar complaints are made; and in many of these countries remedial measures, by stringent regulations and the artificial propagation of the more valuable of the food fishes, have been carried into effect. It has now been made clear by statistical and scientific investigations that the seas around our coasts are not the inexhaustible store-houses of food material that they were thought to be less than a generation ago. The doctrine that the operations of man cannot disturb the balance of life in the sea, and diminish or exhaust the supply of valuable food fishes, is now abandoned by fishery authorities, almost everywhere." Page 13

"In Scotland, by the operation of the Herring Fisheries (Scotland) Act of 1889, and by the by-laws passed by the Board in conformity with that Act, the whole of the territorial waters and certain firths and bays, have been closed to beam trawling."

NETS AND SEINES—THEIR USES.—BY A MEMBER OF THE BUREAU.

Extract from
the 13th annual
Report of
the Boston
Fish Bureau.

The purse seine is principally used upon the Atlantic Coast for taking mackerel and menhaden. They are very little used in any other branch of fishery.

Seines are, however, used in some localities upon the Pacific Coast for taking salmon, smelt, shrimp and small herring, and in different localities along the Atlantic Coast and Gulf of Mexico.

The mackerel purse seines are generally made from 80 to 225 fathoms long, and they vary in depth from 7 to 20 fathoms.

These seines are set from a seine-boat, from 30 to 40 feet in length, the seine being paid out over the stern of the boat, encircling the school of fish.

When the two ends of the seine have been brought together, the purse line, which is reeved through rings attached to bridles upon the bottom of the seine, enclosing that part, so that the fish are completely surrounded.

The seine is then hauled on board the seine-boat, until the fish are gathered together at the bunt of the seine, where they are bailed out on deck of the schooner, which has been brought alongside of the seine, while it is being pursed.

These seines are made of very light twine and are handled by about 13 men, that number being required to row the seine-boat, handle the seine and purse it. To purse a large mackerel seine requires from 3 to 5 minutes, depending upon circumstances. Cod seines are something that are very little used, excepting on the coast of Labrador, Newfoundland and Nova Scotia. They are large hauling seines used in the shore fisheries; they are made from 80 to 100 fathoms long and from 40 to 100 feet deep.

They are set from the seine-boats and are generally hauled ashore, the fish being bailed out of them after they have been hauled in, so that the fish are collected together in a compact body.

During the past few years there has been a tendency to use these seines something after the fashion of purse seines, and many fishermen have had them rigged with rings on the bottom and with purse lines, so they could be used in deep water. The gill-net is the most ancient form of fish net and is used in a great variety of forms.

Along the sea-coast of the United States it is used in taking salmon, bluefish, herring, codfish, shad, mackerel, bass, etc.

Gill-nets are made of mesh of the proper size to take the different kinds of fish wanted, and as the name implies, they catch the fish by the gills. These nets are set stationary in most places, although in some localities, and for some kinds of fish they are allowed to drift. Gill-nets used in salt water as a general thing are rigged to float either at the surface or within a few feet of it; nets for herring and mackerel being rigged in this way almost entirely.

Gill-nets used in taking codfish are rigged to sink to the bottom; they are made with mesh of 6 to 9 inches, and are set in very deep water.

Bluefish nets are also rigged in very much the same style. In many localities, at certain seasons of the year, the mackerel gill-nets are rigged to sink.

The great bulk of gill-nets used in the salt water fisheries are made of cotton twine; linen, however, being used quite largely for shad gill-nets, which require a large mesh and very fine twine.

Within the past few years there seems to have been an increase in the amount of gill-net fishing done, principally in the region of the great lakes, where a large percentage of the fish are taken by this method.

Unlike the salt water fisheries, the gill-nets upon the lakes are made of linen of the finest and best quality of linen threads and are used principally in taking whitefish, lake trout and herring. These nets are nearly all rigged to sink to the bottom and fish within 6 or 8 feet of it. They are very light nets and are fished from one boat, generally a tug, fitted out for the purpose which attends to its gang of nets daily.

Trap or pound-net fishing has always been a profitable one upon the Atlantic coast and is used in the capture of cod, bluefish, salmon, herring and mackerel.

These traps are made in a great variety of forms and sizes: the general plan, however, is very much the same.

This consists of a large pound or box with a suitable entrance for the fish, and is supplied with wings and leader for directing the fish into them. These traps are set both floating and upon stakes, and are made to fish in deep water up to 14 or 15 fathoms.

This style of fishing takes only the fish that happen to strike the shore where the traps are set and is, perhaps, the most uneven in its operation from year to year of any.

Some seasons the traps do exceedingly well, and then they are likely to go for a number of seasons with poor success. When the fish are running in large numbers the traps frequently take immense hauls, as many as 1,000 or 1,500 barrels being taken at a single haul.

They are generally fished from a boat which is run into the bowl or box of the trap, the netting hauled up under it and the fish brought together so that they can be bailed out.

FISH-WAYS.

BY INSPECTOR HOCKIN.

The nursery of some of the most valuable of our food fishes is in the shallow waters, brooks and streamlets flowing into the upper portions of rivers.

The salmon, for instance, the annual catch of which upon the Atlantic coast alone is estimated as worth \$520,000, ascends nearly to the headwaters of rivers and there deposits its spawn in gravelly beds. And it has been observed to follow with as much certainty as the night the day, that should anything occur to prevent these fish reaching the headwaters by the construction for instance of impassible mill-dams, that the history of the fishery has been one of rapid decline, and from a little consideration it will be readily seen that it is inevitable that this should be the case.

It is well known that spawning beds in the shallow parts of the rivers are not so liable to destruction by the ice during spring freshets, for in these portions of the river ice does not form to so great a depth and is the first to thaw.

Eels which bore in to the beds and devour the spawn are not so abundant in the shallow waters.

Spawn deposited by the parent salmon in the autumn develops into fry by the following spring, and so soon as they have sufficient strength they swim up stream, for it is in the brooks and streamlets they find the insect life upon which they subsist and there too they are safer from the attacks of predaceous fish.

Having passed the fry stage, the fish enters the ocean in the second year of its life.

With the construction of a dam across a stream, the conditions of fish life are completely changed; for if the parent salmon should deposit spawn below a dam it is in waters which have been polluted with saw-dust or there is the danger previously spoken of, that ice destroys the beds or that eels devour the spawn or predaceous fish make a meal of the fry, so that the probabilities of spawn reaching maturity which has been deposited in the deeper waters below a dam, as compared with that deposited as it would be if the natural conditions be restored, is as a matter of course reduced to a very small fraction.

Now not only is the mill-dam a source of enormous injury to the salmon fishery, it is equally destructive to the important fish whose habitat is in the great lakes, but which ascend rivers to deposit its spawn and among those are the bass and fish of the pike family, pickerel, maskinongé and doré.

The foregoing are among the most valuable of our food fish, but of scarcely less importance upon the fisheries are the alewives or gaspereaux. These fish deposit their spawn in lakes and still waters, and while of material value themselves, they, with other bait-fish have an important bearing upon the coast fisheries, for when the former come upon our coast in the spring they attract the deep-sea fish which follow and feed upon them.

Again, the young fish in the fall of the year descend in great numbers and are fed upon by deep-sea fish so that when these and other anadromous fish were plenty in our rivers then also there were abundance of codfish, haddock and other deep-sea fish on our coast, and it is from the decreasing numbers of these fish that year by year the deep-sea fish are found further and further from the shore.

It does not appear to be necessary to point out that with the construction of a dam across a stream the inevitable result must be the annihilation of the alewife fishery.

Therefore not only have we the indirect results which it is impossible to measure, but we have the direct injury to the anadromous fish, and the extent of this injury may be estimated when it is shown that the annual value of these fish taken in Ontario and Eastern Canada is about \$1,000,000.

It would not appear to be overstating the case when it is remembered how very many of our streams are obstructed by dams, that if these were restored to

their natural conditions, this fishery could be increased in value ten per cent, or \$100,000 per annum. Indeed, I think, the possibilities, yes, even the probabilities are much greater than this.

Of course, the great problem has been how to reconcile the interest of mill-owners with the fisheries interest, and while efforts had been made in this direction, I think it can now be said with confidence that this problem has been solved.

In the report of last year, a fish-way patented by me was fully described, and the success which has resulted from its construction warrants me in making this statement.

Quite a number of these fish-ways, were built in Glengarry County, Ont., and Soulanges County, Quebec, and while their first construction was imperfect, because the specifications and instructions were not carried out, they were easily remedied, and satisfactory reports received from Mr. Williams, the vice-president of the Game Society, at Williamstown; the Mayor of River Beaudette, Mr. McNown, and the fishery officer in charge, overseer Boivin, that these structures worked satisfactorily and fish were seen above them this year for the first time since the dams were built.

It is true some lessons had to be learned with regard to the fish-way on the Oromocto River as far as the alewife fishery is concerned.

The velocity of discharge through my fish-way is under entire control, and may be made "to roar as the lion or coo like the turtle dove," and this by regulating the number of compartments and the size of the apertures. Just what force of current the alewife could contend against has heretofore been unknown, that it is a very considerable velocity when it can use the spines on its belly is well known, but it was found to be a comparatively weak fish when forced to swim unaided against a current; all that will be necessary, therefore, will be to have a plank floor just at the bottom of the apertures.

I am pleased to state that at the World's Fair held at Chicago, my fish-way received the highest award, and as it was brought into competition with the fish-way of the world, the department may accept it as the best known means for allowing fish to swim from a lower level to a higher.

Within a comparatively recent period the question of fish-way construction has received attention from the governments of several important nations.

In the United States the subject comes under the province of the State Legislatures, and of these the States of New York, Pennsylvania, Massachusetts, Nebraska, Wisconsin have spent large sums in their efforts to open up streams. Norway and Sweden have given the subject some attention, and one of the best papers upon fish-way construction was written by the inspector of fish-ways for Finland.

The Fishery Board of Scotland have had a number of fish-ways of various forms constructed: and by reference to the report of last year it will be seen that this body have commended my model.

From the reported condition of rivers in Eastern Canada and from facts which have come under my observation, I am warranted in stating that there are in existence to-day 200 mill-dams obstructing our rivers unprovided with fish-ways, and while some progress is being made by your department, it is quite evident if anything like a complete remedy for this state of matters is to be obtained, it will only be by an effort upon a very different scale from what has been made in the past.

Of course, the millowner objects to build fish-ways, and has to be brought to this step by step, and as these structures can be built only when the water is low in the rivers, it will be readily understood that the work has not progressed very rapidly.

Previous to the invention of my model, it would have cost probably \$75,000 to provide a fish-way in each of these two hundred dams, but it is now practicable to construct them for about \$40,000, and that after a design which has been approved as the most efficient in use.

It will be seen from statements made in this paper that such a sum expended in this work would, by judicious management after construction, be returned many times during the life of a fish-way.

I have referred to judicious management after construction: this would involve a report from an officer in charge of a fish-way at least weekly of its condition.

Such an officer should be empowered at once to repair or remedy one in case of accident, the cost becoming a charge on the owner of the dam.

The following fish-ways have been built during the past season: 2 on Jordan River, Shelburne Co; 1 on Gay's River, Halifax; 1 on Fox River, Cumberland; 1 on Philip River, Cumberland; 1 on Chateauguay River, Quebec.

A number have been prescribed for dams at Bobcaygeon and upon the Beaver River, Clarksburgh, Ontario, and are in the course of construction.

The following statements have been made over their signatures by the officers in charge of fish-ways constructed after my model.

J. P. Webber, special guardian, in charge of one constructed in a dam at the foot of Snake Lake, Ingram River, in the county of Halifax, says under date June 19, 1893, "Salmon have been seen jumping at the head of the Lake."

Overseer Gaston says of one constructed in Kneelands dam, Tangier River, in the county of Halifax. "Salmon have been hooked in the lake above the dam since the construction of the fish-way."

Guardian Charles McDougall, of Garden of Eden, in the county of Pictou, says of one constructed in A. Cameron's dam, on the St. Mary's River, in Pictou County. "There is no discount about the new fish-way, I have sat there and seen them pass up by the hundred into the dam, besides, I see them in the lake above."

Mr. Williams, Vice-President of the Game Society, who resides at Williamstown, county of Glengarry, says of fish-ways constructed after my model in McDonald and Dingwall's dam, Williamstown, and Smith and Willing's dam, "in order to ascertain whether fish were going through these fish-ways, I went with the local fishery officer and shut the water off and we found bass and suckers in the fish-way; "not only is this the case, but the local fishery officer (who was appointed by the Local Government) informs me that there are numerous fry of the black bass to be seen in the creeks.

The *Cornwall Gazette*, in May of this year, had an item that Overseer McDonald had examined these fish-ways and satisfied himself that they were working satisfactorily. (This officer had previously reported adversely.)

Overseer Boivin says of fish-ways in dams on the River de Lisle, Soulanges County: "I made careful inquiry and the people on the river are well satisfied with the fish-ways. Bass, suckers, pickerel and maskinongé have been found above the dams this season and these fish had not previously been found there."

Mr. McNown, of River Beaudette, warden of the county of Soulanges, and who was president of the Game Society, and one of those who urged the construction of fish-ways in these dams, says under date July, 1893:

"I am quite familiar with the River Beaudette fish-ways, known as the Hockin fish-way, which were constructed in Judge Ross's dam, also in McLennan's dam, in 1892, and I know that in the spring of 1893, bass, maskinongé and doré have been taken above those dams, and as these fish have not been found there for many years previously they must have gone through the fish-way.

I am satisfied that where they are properly constructed these fish-ways work well."

The following is an extract from Overseer D. J. Macdonald's letter, dated Alexandria, July 4, 1893:

"In regard to Inspector Hockin's letter as to placing traps at the head of his fish-way, to find out if fish were going up, I learned on inquiry that fish had been seen going up and deeming this satisfactory I did nothing further."

THE FISHERIES OF BRITISH COLUMBIA.

The fisheries of British Columbia are probably the richest in the world; in 1873 little had been done to develop them. They were then hardly spoken of as an interest, or industry, with the exception of an attempt at putting up salmon in tins on the Fraser River, and one or two whaling enterprises of a few years' standing, no efforts appear to have been made to develop the resources of the province in this respect.

A description of the different kinds of fish found in the waters of British Columbia, is given in an article by Sir Hector Langevin, in 1873. There was no law

regarding the protection of fish in British Columbia before the Union with Canada.

Oysters were in 1873 said to be found in all parts of the province. Though small, in their native beds, they were represented as finely flavoured, and of good quality. Rev. Mr. Lundin Brown, in 1863, gave a list of the different kinds of salmon and other fish found in British Columbia waters.

There are interesting references to the extent and value of the British Columbia fisheries, in a prize essay by Mr. Alexander C. Anderson, of Victoria, who subsequently became Inspector of Fisheries for the province.

In 1874, Mr. Alex. C. Anderson prepared a paper on the fish of British Columbia. He mentions that the experiment of preserving salmon in cans, fresh and cooked, which was first introduced on the Columbia River, had been successfully adopted in British Columbia. On the Fraser River, this trade, though comparatively in its infancy, had then attained considerable proportions. The public prints estimated its value from \$200,000 to \$250,000 for the year 1874; Mr. Anderson, however, questioned whether a large proportion of the salmon packed on the Fraser River that year, would favourably compete in the London market with the uniformly rich produce of the Columbia River fisheries.

In his annual report for 1874, the agent of the Department of Marine and Fisheries states that the export of salmon from the Fraser River, for that year, reached 18,179 cases and 2,624 barrels. Nothing, however, is said of the salmon consumed by Indians.

Organization of the Fisheries Service in British Columbia.

On the 8th May, 1876, in accordance with the provisions of the Act 37 Vic., chap. 28, respecting the extension and application of the Fisheries Act to the provinces of British Columbia, Prince Edward Island, and Manitoba, a proclamation was issued extending the application of the above statute to the province of British Columbia, and declaring that the Fisheries Act, 31 Vic., cap. 60, would come in force in that province on the 1st July, 1877.

The principal clauses of the above statute, applicable to British Columbia, were as follows:—

1. Fishery officers, having magisterial powers to be appointed for the enforcement of the Fisheries Act and the Regulations under it.

2. Power to the Minister of Marine and Fisheries to issue fishery leases and licenses.

3. The salmon fishery to come under proper regulations and restrictions as to the times, modes and places of fishing. The size of meshes of nets used in the salmon fishery fixed at not less than five inches extension measure. The use of such nets confined to tidal waters. The tidal boundaries of estuaries to be defined. Above these limits, it was unlawful to fish for salmon with nets. Fishery officers had power to determine the distance between salmon nets. The catching of salmon in the neighbourhood of artificial passes, or in any spawning pools, prohibited. It was forbidden to have in possession salmon roe, or to injure spawning beds.

4. The possession, or sale, of fish, during prohibited seasons, declared to be illegal.

5. Provision for the building and maintenance of efficient fish-ways on mill dams.

6. Fishing on limits leased or licensed to others, forbidden. Navigation not to be obstructed by seines or nets, nor the main channel of streams interfered with. No nets to be set in such a manner so as to entirely obstruct the passage of fish. The killing of fish, when attempting to pass through a fish-way, was prohibited. The young of fish were not to be taken. A weekly close time extending from Saturday evening until Monday morning, was enacted.

7. The throwing into the water of fish offal, dead, or decaying fish, deleterious substances, and saw-dust, prohibited.

8. The statute authorized the Minister of Marine and Fisheries to set apart certain waters for the natural and artificial propagation of fish, and to grant permits

for the taking of fish and fish spawn for stocking or artificial breeding purposes. It also authorized the granting of licenses for the cultivation of oysters, and provided for the protection of oyster beds and other shell-fish fisheries.

9. Penalties were enacted for each offence against the provisions of the statute or of the regulations under it. Illegal fishing materials used, and fish illegally caught were liable to confiscation. In default of payment of the penalties imposed, defendants became liable to imprisonment. The mode of recovering penalties was regulated.

10. Fishery officers were empowered to convict on view. They were given authority to search, or grant search warrants; to pass over land in the discharge of their duties, and to settle disputes as to limits of fishing stations.

11. The Governor in Council was empowered to make fishery regulations, and to vary the provisions of the statute. The publication of such regulations in the *Canada Gazette* gave them legal effect.

Mr. Alex. C. Anderson, of Victoria, whose name has already been mentioned, was, in pursuance of the proclamation, appointed, on the 27th April, 1876, Inspector of Fisheries for the province of British Columbia.

A leading journal, the *Daily British Colonist* pointed to the necessity of regulations for British Columbia in the following article, published 21st December, 1877.

"THE FISHERIES.

"We are pleased to chronicle the return of the esteemed Fisheries Commissioner to Victoria. We should experience greater pleasure were we authoritatively informed that in future he will personally supervise the fisheries during the season. We take it for granted that Mr. Anderson has been made acquainted with all that went on at Fraser River last summer; that he has been told of the wanton destruction of fish-life of which more than one company was guilty; that he has heard that as many as 5,000 dead fish were thrown back into the river in a single day because there were no facilities on hand for preserving them; that the salmon were followed to their spawning grounds and there captured; that nets were stretched across the rivers so as to prevent the fish ascending the stream; that with scarcely any interval of rest the fish were caught after the fishermen had been notified that the canneries could provide for no more—the object seeming to be to destroy as many salmon as possible. "Wilful waste maketh woful want," and we shall be agreeably surprised if the effects of last summer's over-fishing (if wholesale butchery can be called fishing) be not felt for many years to come in diminished "runs" and light "catches." Speaking of the salmon fisheries, we observed that a meeting has been held at Westminster (which was attended by the Commissioner) and that arrangements were made for providing funds for the establishment of a hatchery. This is well as far as it goes; but a dozen hatcheries would be unable to provide for the exhaustion caused by a repetition of the criminal folly that some of the companies were guilty of last summer. Great Britain, Eastern Canada, California, Oregon, all lament the rapid decay of salmon fisheries. Why should not their loss be British Columbia's gain by inducing the adoption on Fraser River and elsewhere throughout the province of the simple and effective rules that experience has proved will preserve fish wealth from complete destruction. We do hope that Mr. Anderson will see to it that the scenes of last summer are not repeated. If other duties require his presence elsewhere, a competent deputy should be appointed to look after the fishery interests, which, with good management and superintendence will become one of the remunerative and permanent industries of the province. No man should have it in his power to say, as a Fraser River steamboat man gloomily expressed it one day last summer, that "Fraser River is *alive* with dead fish from Harrison River to its mouth!"

An article which appeared in the *Mainland Guardian* of the 28th July, 1877, referred to the subject as follows:—

"But where it is known that the fish are in such numbers that, although in some cases one-half the boats are laid up as being unnecessary, the enormous hauls by

the boats still at work, furnish more fish than the canneries can use, and consequently that large quantities have to be thrown back into the river, the malicious character of these fishery disputes will be better understood. That they must be put down with the strong hand, no one can doubt; that any one found with an excessive tendency to disputes must be excluded from fishing altogether, either by himself or his agents, would only be a fair protection for those who desire to follow the pursuit peaceably and fairly."

The Inspector in January, 1878, reported as follows:—

While at New Westminster, on my way down, I had a meeting with most of the fishery owners of that vicinity, at which various matters connected with the past and future of the fisheries were discussed. Among the rest, the subject of a breeding-establishment was introduced.

The objects to be attained by the formation of such an establishment are twofold:—

1. To secure a regular supply of salmon year after year, to supplement the present natural supply, which, though periodically most abundant (as witness the past season), is partially intermittent, through causes depending apparently on the peculiar habits of the salmon of these waters.

2. To introduce into the waters of the Fraser the large salmon of the Columbia River (*S. quinatt*), a most valuable fish, the introduction of which would largely enhance the prospective value of our fisheries.

In this matter I suggested to the meeting that, in order to approach the Government effectively, and to elicit the most speedy action, it would be expedient to submit to them some definite proposal, in guarantee of their own earnestness.

Thereupon a series of resolutions were proposed and carried, a memorandum of which, by request of the meeting, I now respectfully submit herewith.

You will perceive that the fishery owners themselves propose, with this definite object in view, to raise a fund to yield annually, as computed, some \$7,500 in aid of primary outlay, and the continuous expense of the department for the protection and regulation of the fishery interests in this province.

The amount of boat license proposed may probably be considered by you excessive; and it is for you to judge whether or not it should be somewhat reduced, or, indeed, whether in this or some other mode the necessary contribution should be raised in aid of future outlay. I may, however, add that the form and amounts suggested in the memorandum were unanimously approved by those present, and would, therefore, it is to be presumed, be generally acceptable.

MEMORANDUM.

At a meeting held at the Colonial Hotel, New Westminster, B.C., on the 17th December, 1877, Mr. Anderson, Inspector of Fisheries, being in the chair, and the following gentlemen, connected with the fishing interests on the Lower Fraser, being present, viz.:—Messrs. Holbrook, English, Herring, Ewen, Wise, Birrell (the last representing the firm of Finlayson & Lane).

Mr. Birrell acting as secretary, the following resolutions were carried:—

Mr. English proposed that the Dominion Government should be asked to make an appropriation for the establishment of a breeding establishment for the regulation of the supply of salmon, at a suitable point on Fraser River, the cost of which it is estimated would be about \$20,000. In aid of this object, and to provide a fund for the subsequent expenses, it is proposed that a license of twenty dollars on every boat employed in the fishery shall be paid in advance, and also a tax or duty of eight cents per case of four dozen one-pound cans of preserved salmon, and twenty-five cents per barrel of salted salmon, packed at any cannery or curing establishment on Fraser River. Mr. English's proposition, which was unanimously concurred in would, based on the production of the past season, yield a revenue of about \$7,500; and it is probable would, with the extension of the industry, exceed that limit.

Mr. Ewen suggested that, as a preliminary measure, a competent person, versed in the subject of fish-breeding, should be sent from Canada to examine and select a suitable position for the erection of the proposed establishment.

The meeting is of opinion that the General Dominion Fishery Act is quite inapplicable, as a whole, to this portion of the Dominion, bearing in view the different habits and nature of the salmon frequenting these waters.

Mr. Wise drew the attention of the Inspector to the necessity of enforcing that portion of the Act which prohibits the emptying of saw-dust into the rivers.

It was also unanimously agreed that the Dominion Government be respectfully requested to appoint the steamer "Sir James Douglas," or other efficient vessel to remove the snags at those points where they impede the drifts, from the mouth of the river upwards as far as St. Mary's Mission.

Correspondence subjoined shows the interest in the protection of the Fisheries in British Columbia, then felt :—

THE SENATE, February 20th, 1878.

SIR,—With reference to the question of necessary protection to be given by law to the salmon of British Columbia, on which subject we have already had the honour of a conference with yourself, we, in accordance with your expressed wish, beg to make the following suggestions :—

In the first place, we might premise that, as the habits of the salmon frequenting the rivers emptying into the Pacific Ocean appear, from the most reliable information to be obtained, to be different to those of the same species on the Atlantic seaboard, any regulations which it might seem well now to put in force should be only of a temporary character, while during the coming season, some officer thoroughly conversant with the subject should be sent by the department to British Columbia to investigate the matter and report upon it.

In the second place, we would propose to prohibit for the coming season, commencing April 1st, the taking of salmon by seine, gill or other nets, or any fixed or moveable traps, &c., for canning and exportation, above the tidal waters in the rivers of British Columbia. In the Fraser River, which is the principal river fished in this way at present, this regulation would leave available for netting some 60 miles in length of water, extending from the mouth of the river to a place called Sumass.

Thirdly, that the size of the mesh of the nets used should not be less than five inches in extension; that no net should be longer than one-third the width of the river, and no two nets, traps, &c., be fixed or allowed to drift nearer to each other than a distance of 250 yards.

Fourthly, as to close time, it would appear that there are three or four distinct species of salmon which ascend the rivers of British Columbia at different times of year, and have different breeding seasons. To protect them all by an annual close time suitable to each would be practically to close the fisheries all the year round. Under these circumstances it must be for your department to consider what duration of weekly close time would be sufficient. We would suggest from 8 a.m. on Saturday till twelve midnight on each Sunday, thus allowing the fish two whole days and a night and a half in each week, to ascend the rivers free from interference.

In the fifth place, the canneries and fish-curing establishments should be compelled to bury their fish offal, or else to utilize it on shore for manure or otherwise. We would not allow the use of the perforated boxes mentioned in the Fisheries Act, 1868. We are of opinion that the above regulations will be sufficient for the present if duly enforced. We are sure they will be in no way offensive to those already engaged in the fisheries, or detrimental to their interests, while, at the same time, they will afford the salmon a fair chance of reaching the spawning beds in the higher reaches of the river in sufficient quantities. But it is essential that active, efficient and well paid overseers or bailiffs should be appointed to enforce the carrying out of the regulations in their entirety, and this especially on the Fraser River.

We will take this opportunity of calling your attention to the question of the advisability of at once organizing a fish-breeding establishment in British Columbia. It has, doubtless, come to your knowledge that during the past fishing season the proprietors of different canning establishments on the Fraser River, being called together by Mr. Anderson, the Inspector of Fisheries for British Columbia, voluntarily invited the imposition of certain taxes on themselves and their establishments

in order to raise a certain sum to supplement any grant which might be made by the Government of the Dominion for such a purpose. Their prudence and foresight and willing liberality cannot be too highly commended, and it would seem that the Government could hardly do less than meet them half-way. The experience so dearly gained in all rivers of the extraordinary way in which the numbers of salmon annually decrease, unless some such means are taken for their preservation, and artificial increase would clearly point to the advisability of establishing such an inexpensive and, at the same time, useful and remunerative concern, at an early date. Besides, the security which would be given by such an undertaking, with regard to the regular annual supply of the fish frequenting the rivers of British Columbia, it is considered of great importance to introduce into them the very large and valuable species of salmon found in the Columbia River in the neighbouring United States, but unknown in our province.

We would ask to call your attention to the fact that it was solely with the above object in view that the offer above alluded to with reference to taxation on fishermen and fishing implements on the part of the fishermen was made, and not with a view of meeting the expense attendant on the employment of fishery overseers or water bailiffs. An industry which, in almost the first year of its establishment, exports fish approaching in value to half a million of dollars is clearly of such direct and indirect value to the Dominion at large as to warrant the Government in going to a certain expense to secure its continuance; and it would hardly seem just that while Indians and others can, without taxation and unfettered, secure fish for home consumption, that some should be taxed merely because the fish they take may have a different destination.

We have the honour to be, sir,

Your obedient servants,

(Signed)

CLEMENT F. CORNWALL,

do

F. J. ROSCOE,

do

EDGAR DEWDNEY.

The Honourable

The Minister of Marine and Fisheries.

Copy of a Report of a Committee of the Honourable the Executive Council, approved by His Honour the Lieutenant-Governor, on the 19th day of March, 1878.

On a Memorandum from the Honourable the Provincial Secretary, dated the 19th day of March, 1878, recommending the approval by His Honour the Lieutenant-Governor of an Address of the Legislative Assembly, requesting that His Honour will be pleased to take into consideration the following resolution of the House:—

“Whereas application has been made to the Dominion Government for the exclusive right to fish in certain parts of Fraser River, which, if granted, will be a great injustice to the fishing interest;

“That this House is therefore of the opinion that the Government should respectfully request the Dominion Government not to grant any exclusive rights to fish for salmon in the waters of British Columbia.”

The Committed advise that the recommendation be approved.

Certified,

WILLIAM SMITHE,

Minister of Finance and Clerk of Executive Council.

16th February, 1878.

MAY IT PLEASE YOUR HONOUR,—We, Her Majesty's dutiful and loyal subjects, the Legislative Assembly of the province of British Columbia, in Parliament assembled, beg leave to approach your Honour with our respectful request that your Honour will be pleased to take into consideration the following resolution of this House:—

"Whereas application has been made to the Dominion Government for the exclusive right to fish in certain parts of Fraser River, which, if granted, will be a great injustice to the fishing interests;

"That this House is therefore of opinion that the Government should respectfully request the Dominion Government not to grant any exclusive rights to fish for salmon in the waters of British Columbia."

(Signed) J. ROLAND HETT,
Clerk.

To His Honour

The Honourable ALBERT NORTON RICHARDS,
Lieutenant-Governor of the Province of British Columbia.

The following were the fishery regulations for British Columbia adopted by the Governor General in Council, 30th March, 1878:—

1. Drifting with salmon nets shall be confined to tidal waters; and no salmon net of any kind shall be used for salmon in fresh waters.

2. Drift-nets for salmon shall not be so fished as to obstruct more than one-third of the width of any river.

3. Fishing for salmon shall be discontinued from 8 o'clock a.m. on Saturdays to midnight on Sundays.

The following correspondence then occurred:—

(By Telegraph from New Westminster, B.C.)

OTTAWA, 24th June, 1878.

Please withdraw adoption of fishery regulations till further advised by letter. There is no salt water salmon fishing in British Columbia rivers. Does fresh water mean waters affected by tides? Enforcement of this rule virtually closes canneries. Closing salmon fishing till midnight Sunday compels canneries to close Monday for want of fish. They ask for close time to be from noon Saturday till 6 p.m. Sunday. Please reply.

(Signed) T. R. McINNES, M.P.

To Hon. A. J. SMITH.

Telegram.

OTTAWA, 24th June, 1878.

Don't enforce close season according to regulation. Let it be from Saturday noon till 6 p.m. Sunday.

(Signed) A. J. SMITH.

To A. C. ANDERSON, Esq.,
Fishery Officer, Victoria, B.C.

By Telegraph from Victoria, B.C.

OTTAWA, 6th July, 1878.

Canneries anxious that words be added at end of section 1 of Order in Council, 30th May, as follows: "Above established tidal limits."

(Signed) A. C. ANDERSON.

To Minister Marine and Fisheries.

Among other things the desire for a hatchery was expressed:—

"Resolved,—Referring to the action taken by the Board of Cannery Proprietors at their meeting, held on the 20th day of March, 1878, recommending the establishment of a salmon hatchery on the Fraser River during the present season, this meet-

ing respectfully requests Mr. A. C. Anderson, Inspector of Fisheries, to urge upon the Honourable the Minister of Marine and Fisheries, the desirability of a sum, say \$25,000, being placed upon the estimates of the present financial year to secure this object."

"Resolved,—Also, that Mr. Anderson be also requested to recommend that a thoroughly efficient officer be instructed to visit the Fraser River, before the close of the present fishing season, and to establish a fish-breeding station there."

Mr. Anderson reported to 31st December, 1878.

* * * * *

The several Orders in Council for the regulation of the fisheries in this province, with subsequent modification by telegram, were duly promulgated as soon as received. Some verbal alterations in the proclamation will be necessary; and these, with such suggestions in regard to the general provisions of the Fishery Act as required to be modified to suit the circumstances of this province, form the subject of a special report which will accompany this, in accordance with the instructions contained in your circular letter of the 7th December last.

NASSE RIVER.

This stream which discharges into the arm of the sea, terminating in the Observatory Inlet of Vancouver, close to the Alaska boundary, is of some magnitude, and with steamers of light draught might be navigated for twenty miles or more from its entrance.

In the lower part the mountains rise, generally, abruptly from the shore. Some miles higher up they recede in parts, leaving flat alluvial banks of moderate extent. The fishing station of Mr. Robertson, the only station at present established here, is situated on the right bank, close to the main oulachon fishery of the Indians, who, during spring and early summer, resort thither from many quarters, and in large numbers. Three miles above this point Mr. Robertson has a house with a considerable patch of land under cultivation, where, during the period of my visit, most of the ordinary culinary vegetables were growing in the most flourishing manner. There is a small steam saw-mill here; the timber sawn (of which there is a copious supply) being chiefly, if not entirely, the spruce, or menzies fir, a wood easily wrought, and of excellent quality. The main buildings connected with the fishery are, however, at the lower station, and I was much struck with the evidences of industry and energy which were there apparent. With very moderate aid from white and skilled labour, though when necessary with the hired assistance of the Indians of the neighbourhood, Mr. Robertson had succeeded in erecting since last year, besides other buildings, a large and substantial structure for present and future operations. This building, 84 feet in breadth and, with the extension of the lower portion, upwards of 100 feet in length, was two stories in height, and in every part well finished and nearly glazed. Attached to the lower part was an extension containing the steam apparatus for heating the vats for extracting the oulachon oil, a business prospectively of much importance. On the whole, I was much pleased with my inspection, and from the interviews which I had with the native chiefs, I concluded that Mr. Robertson, who holds a commission as Justice of the Peace, conducts his business, with relation to those around him, with commendable prudence.

The oulachon, though frequenting some other rivers along the coast, including the Fraser River, is no where found of so fine a quality as in the Nasse. Of this fish the *Phâteichshys*, or *Osmerus Richardsonii*, I have already spoken in previous reports. The shoals, on their way to the spawning beds, reach the entrance of the Nasse about the end of March. The river thenceforward, till the termination of the season, is crowded with the ascending fish as far as the tide water extends—the limit of their spawning-ground. This point on the Nasse River is some twenty miles above the mouth. After spawning, the fish return to the ocean in the ordinary way; but no knowledge of their resort during the interval of their visits is obtainable.

The following varieties of salmon frequent the Nasse:—

1st. Run about 20th April to 10th June; 27 to 48 pounds weight; called by the natives *yee-âgh*, and corresponds apparently with the *saw-quâi* of Fraser River.

2nd. Run about 20th June; 7 to 12 pounds; called by the natives *missaugh*, and correspond apparently with the *suck-kâi* of Fraser River.

3rd. Run about 20th August to end of September; about 15 pounds; called by the natives *mi-llaet*, and corresponds apparently with the *co-hues* of Fraser River.

4th. Run, a fine silver salmon of from 10 to 12 pounds weight succeeds for a short interval. This variety was called by the natives *you-agh*. The hook nosed salmon, (s. canis), locally called *kai-neesh*; and the *stum-maun* (*hun-nun* or *hone* of the Lower Fraser) succeeds in the late autumn. The former of the last two varieties is a fish of no commercial value, though dried by the natives for their own use, and when caught in the salt water before entering the rivers to spawn, not unpalatable to more fastidious tastes. The *stum-maun*, a white-fleshed variety last mentioned, though palatable when fresh, is not valued for curing; though some were, I have understood, canned at the Skeena fisheries during the past season, injudiciously, I think, if intended for market. The first four varieties, which may be regarded as the staple salmon products of the river, are fish of superior quality, and well fitted either for canning or salting.

In addition to the true salmon that ascend the Nasse there is a variety of sea trout of considerable size (10 or 12 pounds or more) which enter the river late in the season, and are caught near the outlets of the interior lakes in early spring. These fish, known here as *la-âlth* and corresponding apparently with the *tays-lay* of the Upper Skeena, are of fine quality; and if procurable in sufficient abundance would be valuable for market purposes. Continuing to feed voraciously after they leave the salt water, these trout (unlike the salmon in both respects) do not deteriorate as they ascend. Unlike the salmon of these waters, too, they return to the sea after spawning, after the fashion of the genus elsewhere.

I was particular in my inquiries as to the condition of the spawning beds on the upper waters; I was glad to be assured by Mr. Robertson that, from his own personal observation, great care is extended by the natives towards their protection. No one is allowed to fish within certain limits; and several circumstances were mentioned by Mr. Robertson, all tending to show that the Indians both understand and appreciate the importance of preserving the nursery grounds from injury.

* * * * *

SKEENA RIVER.

This stream, the mouth of which is about 50 miles south of Fort Simpson, and about 500 from Victoria, is of somewhat greater volume than the Nasse. Circumstances did not permit me to ascend it as in the other case, and my visit was confined to the entrance, near which two canneries are established. The Skeena, however, has always been regarded by the agents of the Hudson's Bay Company as one of the most prolific streams of the north-west coast, and one less subject to those vicissitudes of supply which have always been characteristic of the Fraser. Indeed the *Babine Post*, situated on Lake *Nâ-tâ* at the head of one of the tributaries of the Skeena, has always been a staple mart where large supplies of dried fish were procurable, for the supply of other posts, less fortunately situated, on the head waters of the Fraser, not far distant. Twenty or thirty thousand salmon, or more if required, have thus been annually procured by the company for many years, bought from the Indians out of their enormous superfluity. The quality of these fish, too, and their richness, have always been conspicuous, when compared with the salmon caught in a corresponding position in the waters of the Fraser. This difference is ascribable, doubtless, in part to the fact that their travelled course has been shorter; but there are grounds, too, for believing that their condition was originally better.

The success of the canneries at Skeena mouth so far has not been conspicuous, though one of them, it is true, has been only recently established and cannot therefore be fairly judged. Some Indian complications, too, which I have explained elsewhere, and which are now under the consideration of the Indian Department, caused partial impediment during the past season, the recurrence of which it is to be hoped will be averted for the future. I cannot conceal my opinion, however, that

much of the ill success complained of may be ascribed to the line of proceeding adopted. My recommendation would be that the main stream of the Skeena itself should be regarded as the chief source of supply, with the certainty of obtaining fish of the choicest quality only. The small streams in the neighbourhood, however, which during the past season appear to have been the chief source of attraction, yield only varieties of a comparatively inferior description; and there are other objections, too, which, under fuller information, I shall hereafter make the subject of a special report.

The varieties of salmon resorting to the Skeena are identical, as far as I have been able to ascertain, with those found in the Nasse.

12. Reverting to the Fraser; as will be perceived by the return, the business of this section has materially increased since last year. Three additional canning establishments have been in operation, making eight now in existence between the vicinity of New Westminster and the mouth of the river: the erection of another, I am informed is in contemplation. The subjects referred to in the Commissioner's letters of the 28th May, have received due attention. With regard to one of these (the question of the disposal of the saw-dust at the mills) I am happy to say that the mill-owners at once evinced their readiness to comply with their regulations, and all cause for complaint has ceased. These mills are worked by steam, and much of the refuse is consumed in the furnaces—the superfluity being employed for embanking or road-making around the premises, or, where not required for these purposes, will be otherwise disposed of. I am glad to have the opportunity of testifying to the alacrity with which the gentlemen in question have met the views of the department when signified to them by the local officer, Captain Pittendreigh. I had some misgivings about the disposal of the offal from the canneries, lest possibly some evil effect as regards the public health might arise—though as I last year remarked, the greater portion rapidly disappears before the innumerable small fishes. I accordingly wrote recently to Dr. McInnes, the member for the district, suggesting measures whereby possibly the refuse of the canneries might be profitably utilized, as I am told is now done on the Columbia River. After inquiry, Dr. McInnes writes to me that from all he can learn this measure would not be at present practicable; he agrees with me that for sanitary, if for no other reasons, it would be impracticable to dispose of the offal by burial on shore, and suggests as the alternative that the fish curers should be required to convey their offal into mid-channel, whence it would be speedily carried out seaward and cause no detriment. The cannery proprietors, with whom, at my request, Dr. McInnes consulted, concur in this view, so that there will be no difficulty in securing its general adoption.

13. It would be superfluous for me to attempt to describe the various conditions of a canning establishment, as organized for the prosecution of the salmon industry in this province. I may, however, briefly state that many ingenious devices, with labour-saving apparatus of divers kinds, are eagerly adopted as necessity suggests. It is, of course, only by an organized system of action, and the minute subdivision of labour, that the operations of the industry, from the cutting up of the tin plates, the shaping, the soldering, up to the final labelling of the cans after the insertion and cooking of the contents, can be profitably or successfully carried on. It is pleasing to witness the order and regularity with which these various processes are accomplished; and I cheerfully bear witness, after having visited the various canneries in succession, to the prudent regulations which are obviously in force, and the admirable measures to secure cleanliness that prevail. The structure of these establishments, too, and their various internal appointments, bear evidence of confidence in the permanency of the business. There is no appearance of make-shift contrivance to serve a temporary purpose, but everything wears a lasting and substantial air. The importance of the industry, from an economical point of view, and in view of its future extension, cannot be disregarded. Already, on the Fraser alone, nearly 2,500 men are employed during the fishing season. Among these there is a proportion of young Indian men, who are valuable as assistants in the fishery and readily acquire the art. In the indoor operations a good many Chinese are employed. The services of these last are of special value in the canneries. In consequence of a local law

which was passed during the last session of the Provincial Legislature, some difficulty with regard to the employment of the Chinese was at one time apprehended; and the cannery proprietors addressed to you a memorial on the subject, of which a copy was transmitted to me. That document puts the question very fairly before you; and on my return from the north I also addressed the department on the subject. I am happy to add that the evil consequences at one time apprehended were averted.

HERRING FISHERY.

14. As mentioned in my report of last year, a quantity of these fish were put up, by a firm in New Westminster, in barrels for exportation. The result was unfortunate: through some defect in the packing process the whole lot spoiled and was unmarketable. I am persuaded, however, that it only requires a due knowledge of the art to prepare these fish profitably for market in the usual way. Formerly it was contended that the herring of this coast were too dry to be worth the trouble of packing; now it is asserted they are too fat to undergo it. In the one case, caught out of season, they were doubtless worthless; in the other, caught on the banks while in their prime, they are, in my opinion, a superior fish, fit for curing in any way. I think public attention is now turning towards them, and that a more successful attempt during the coming season will bear me out in the opinion I have always entertained. Then, as I have elsewhere remarked, an industry of boundless extent will become developed.

Meanwhile, failing their more legitimate application, the herrings have been recently turned to account in another way. This is the extraction of their oil for commercial purposes. Late in November, I was notified by the fishery officer at New Westminster, that two persons, Messrs. Hanson and Rouster, had commenced a herring fishery in Burrard Inlet, in that neighbourhood, and were extracting the oil, preserving the refuse for sale as manure. In twenty-five days they had succeeded in getting 1,500 gallons of oil, reported to be of fine quality, and valued at a somewhat higher rate than the ordinary fish oils. I have not yet obtained the return of the whole proceeds of the undertaking up to the end of the year, but it will doubtless come to hand before the closing of the general abstract, which will accompany this.

The establishment of these new adventures is not a stationery one, but being on a kind of scow or flat boat, is movable from place to place. The apparatus is described as consisting of a steam boiler, which supplies steam to four vats, in which the herring are steamed and afterwards pressed by means of powerful screws attached to the vats. The oil flows out through perforations in the bottom. The whole outfit is estimated to cost about one thousand dollars. Messrs. Hanson & Rouster, in addition to their own labour, employ five men, and use one boat with 80 yards of net.

Captain Pittendreigh, who supplied the above particulars, adds in his report: "The herrings I saw yesterday (*i.e.*, at Burrard Inlet), were of fine quality, and equal to any on the Atlantic sea-board." The latter conclusion may be fairly questioned, but while unprepared to admit its correctness, I am equally unprepared to controvert it.

Comments of Inspector Anderson on a Resolution passed by the British Columbia Board of Trade.

With reference to the accompanying copy of a resolution of the British Columbia Board of Trade, the undersigned respectfully remarks as under:—

Regarding the clause numbered 1 on margin of resolution.

1. The undersigned would feel relieved of a delicate responsibility were he assured of the advice and co-operation of others, forming a board as suggested, in cases when the granting of additional licenses for canneries in localities near which other canneries have already been established had to be considered.

2. In the formation of this board he would gladly accept the co-operation of the Indian Commissioner, Mr. O'Reilly—and he suggests that, in the event of the occasionally unavoidable absence of that gentleman, the Indian Superintendent (Dr. Powell), should be authorized to act as his substitute. This to avoid the possible stoppage of business.

3. The selection of a third party by the Board of Trade is nowise objectionable provided always that the party so selected be nowise interested, directly or indirectly in fishing operations already in progress, or the establishment of which may be in contemplation.

4. The advisement and consent of the board to be necessary only in cases of application for new licenses as mentioned in par. 1 of this report, and not to extend to the signature of licenses—such signature to continue with the inspector of fisheries as at present.

With reference to the clause numbered 2 on margin of resolution :—

The preceding provision sufficiently guards against the over issue of licenses ; while the “ tidal limit ” provided by the Order in Council, as modified, is definite.

With reference to clause numbered 3 on margin of resolution :—

The undersigned considers it expedient that parties seeking to establish new canneries on rivers and in places where salmon canneries have already been established should be required to give public notice as proposed.

ALEX. C. ANDERSON,
Inspector of Fisheries, B.C.

VICTORIA, B.C., March 9th, 1883.

SIR,—I return the copy of the resolution of the Board of Trade concerning the issue of salmon-fishing licenses, with remarks appended.

It would be a grievous pity to fetter the business with any restriction beyond what I have suggested ; and it is important to guard against any attempt to establish a monopoly of privilege, to the exclusion of legitimate investment in a growing and valuable industry.

As regards the signature of licenses in ordinary cases it would require to proceed without the sanction of the board, whose functions, if established, should be confined solely to the consideration of *new* licenses for localities already partly occupied, else all progress will be impeded.

I have the honour to be, sir,

Your obedient servant

ALEX. C. ANDERSON,
Inspector, B. C.

W. F. WHITCHER, Esquire,
Commissioner of Fisheries,
Ottawa.

Resolved :—

1. Whereas under the existing fishery regulations, salmon fishing licenses are issued in this province by the Inspector of Fisheries, who has the power of regulating the number of licenses applicable to any particular river or fishing place ;

2. And whereas in the opinion of this board, it is not considered to be conducive to the fostering of the fishing industry that such discretionary power should be entrusted to one person, therefore this board respectfully recommends that the Hon. the Minister of Marine and Fisheries should amend the regulations in this particular, by substituting for the Inspector of Fisheries, a board of three, viz., Inspector of Fisheries, Indian Commissioner, and a third person to be selected by the B.C. Board of Trade, and which board should have the power of determining the fishery limits of each river or other fishing place in this province and of regulating the number of licenses to be issued.

3. The Board also recommends that applicants for new licenses to fish in rivers, places where fisheries have previously been established, shall be required to give

notice of their intention to apply for licenses by advertisement in a local paper and the *Government Gazette*. Such notices to be inserted for 30 days prior to application being made.

EDGAR CROW BAKER,
Secretary.

PROVINCE OF BRITISH COLUMBIA, GOVERNMENT HOUSE,
VICTORIA, 20th Feb., 1882.

SIR,—I have the honour to inclose herewith a pamphlet which I have had forwarded to me, viz., "Report on Salmon Culture by the British Columbia Board of Trade," which deals with so important a subject to both the immediate and prospective interests of the province that I am glad to have an opportunity of supporting to a certain extent the views enunciated.

I remember some years since when I had the honour of a seat in the Senate of Canada, I with others, first brought the matter of the necessity of some protection being given to salmon in this province by means of the enforcement of certain regulations with regard to the methods and seasons of taking them, and I was glad to find that the importance of the question was fully recognized by the Department of Marine and Fisheries, and that in pursuance of our representations certain protective steps were taken. Those steps were in my opinion, if properly enforced, sufficient for the purposes required. It was arranged that salmon should not be taken for canning or commercial purposes generally except in such parts of the rivers as were affected by the tides, and that there should be a close time of 30 hours in each week (not 24 hours as stated in paragraph 3 of the pamphlet) during which no nets of any description should be cast or drawn in the rivers. Some other minor regulations need not be referred to.

But last summer this close time was done away with on the Fraser River between the 10th day of July and the 25th August, during in fact the whole time in which the principal and most valuable run of fish continues. So enormous was the run of fish that a number of boats (which under ordinary circumstances would have been employed) were thrown out of work, a smaller number being able to secure all the fish that could be utilized by the canneries, and consequently it is quite probable that a perfectly sufficient number of fish for breeding purposes ascended to the higher reaches of the river. But this would only be the case in occasional years, and it does seem to me that it would have been better to allow the fuller measure of protection to the salmon to remain in force instead of giving way to representations of those who can only be looked upon as interested parties. I have been assured by the very efficient Inspector of Fisheries for the province (Mr. Anderson) that doing away with the close time was a tentative and not a permanent measure, but I must say I am distinctly opposed to a tentative measure which can and probably will ultimately prove disastrous in its effect.

As I have already had the honour to say, I think that up to the present time the regulations now in force would be and perhaps have been sufficient to secure the ends in view, but now, owing to the success which has attended the enterprise of those who first established canneries on our rivers, and owing to the largely increased and increasing demand for and consumption of canned salmon in all parts of the world, it is perfectly certain that many new establishments of this sort are in contemplation. The question at once arises, how are such establishments to be limited in number, and how is some supervision over them to be established? This question is one to be very cautiously treated. It is necessary to try and protect the future interests of the provinces of the Dominion by providing against undue present destruction of fish, it is necessary to remember and provide for the present and future needs of those native Indians of the province whose principal staple food is salmon, and at the same time it is necessary not to throw undue or vexatious difficulties in the way of those who are ready to expend their time and capital in the establishment of canneries, which canneries are of great economic value to the province, employing as they do during their season a large amount of well paid labour.

The issue of licenses to those engaged in this business, as suggested by the Board of Trade, would appear to me as ready and efficacious a way of obtaining control over them as can be proposed.

Such control is necessary to prevent over-fishing of the different rivers and irregularities generally, to secure for the statistical purposes correct returns from the different canneries, and to guard the natives in their prescriptive rights of fishery.

With the existing regulations properly enforced, and the additional safeguard of a system of license, I trust that we may expect that the salmon fisheries of British Columbia will shortly be largely extended in scope and productiveness, and will be as lasting as they are valuable.

I hope I may be allowed to point out that the work of the Inspector of Fisheries (Mr. Anderson) is rapidly increasing. He has taken much interest in it, and is decidedly a valuable officer in his position. If any such thing is in contemplation, I am sure I am right in saying that an increase in his small salary is fully deserved.

I have the honour to be, sir
Your obedient servant,

CLEMENT F. CORNWALL,
Lieutenant-Governor.

REPORT ON SALMON CULTURE BY THE BRITISH COLUMBIA BOARD OF TRADE.

Your committee appointed to report upon the question of recommending the Government of the Dominion to enact regulations for the proper protection of fisheries in this province, subjoin the following as their views on the subject:—

THE FISHING INDUSTRY.

1. The importance of the fishing industry to the Dominion and British Columbia cannot be over estimated, and the growth of it, as evidenced by the fact that in 1880, the value of canned salmon put up in the province was \$305,000, while in 1881, it had increased to \$875,000, promises to be so rapid that your committee recommend that while the industry is still young, the rivers well stocked with salmon, and apparently no injurious diminution of the fish supply yet experienced, well considered and firm steps should be taken to protect the rivers from over-fishing, and thereby place this valuable industry on a secure and lasting basis.

Compared with the Columbia and Sacramento, the rivers of this province are small and their capabilities as fishing grounds are very limited. On the smaller streams utter exhaustion of the fish would soon ensue from over-fishing, while in the Fraser and Skeena rivers, the supply would be so diminished as to seriously injure the industry, which under proper protective measures, should not only continue as a means of employment to a very large portion of our population, but be developed on a far more extensive and permanent footing.

The evils of over-fishing are so forcibly set forth in a letter addressed by Mr. Samuel Wilmot to Messrs. B. Haigh & Sons, under date the 19th November last, and published in the *Daily Colonist* of the 12th instant, that the committee consider it right to append it to this report.

NEW WESTMINSTER, B.C., 30th December, 1881.

To the Editor :

DEAR SIR,—The inclosed letter from S. Wilmot, Esq., Newcastle, Ont., is a reply to ours asking for information about the rearing of the young salmon in our experimental hatchery. It is so interesting that we obtained Mr. Wilmot's permission to publish it.

Yours faithfully,
B. HAIGH & SONS.

Newcastle, Ont.

NEWCASTLE, ONT., 19th November, 1881.

Messrs. B. HAIGH & SONS, New Westminster, B.C.

GENTLEMEN,—Your favour of the 26th October last reached me on the 15th inst., being somewhat delayed in going to Ottawa before arriving here.

You ask me for information concerning the artificial propagation of salmon, and as to the best method of rearing the young fry previous to the time of their migration to the ocean. I am well aware of the immense benefit now derivable from the salmon traffic in your province, and can therefore readily understand why persons like yourselves who are largely engaged in the preserving of that fish should desire to encourage any measure that would have a tendency to keep up the standard in number (if at all possible) of this very valuable source of commerce in your country.

I do not desire to speak disparagingly to you on this subject "of keeping up" the quantities of salmon that are at present so plentiful with you, but I fear that unless you exert yourselves most earnestly and perseveringly to stay to a certain extent the immense slaughter of salmon now carried on in your waters, you will, before many years pass by, find yourselves in precisely the same condition that we are in here: almost denuded of that magnificent fish.

I desire to mention to you briefly my own personal knowledge and experience in relation to salmon here in my short lifetime. My father settled upon this farm where I now live, and which I own, in 1816. He selected it more particularly because a small stream or creek (as we call them here) ran through the property which at certain seasons of the year was literally teeming with salmon, almost crowding themselves (during certain runs) out on the banks of the stream. The Indians (the place then was almost a wilderness) caught these fish in vast numbers; they were known to be sold for a York shilling ($12\frac{1}{2}$ cents) a dozen. I was born in 1822; have lived here ever since; during my boyhood I thought nothing of spearing a dozen or two salmon of a morning before commencing my work on the farm, which in those days was not 7 or 8 o'clock, but shortly after daylight. I have known of 3,000 salmon being speared with canoe and torchlight in one night at or near the outlet of the creek into Lake Ontario during a freshet in the fall of the year. There were in the fall of 1836 within a distance of half a mile of the stream on my farm, and within a few rods of my door, 500 salmon speared, my brother and myself killing 90 of them; there were thousands of fish passed by us on account of a large freshet then running in the stream, which prevented our seeing only a partial number within range of spearing. In fact, this and all other streams emptying into Lake Ontario from Niagara to Kingston were in those days alive with salmon in the autumn months. Torchlight, spears, nets, and every other engine of destruction then in use (and they were then all very rude in their construction) were wantonly and I may say barbarously used by the settlers, all trying to get the greater number of fish. Our streams were all very small (mine could be jumped over in many places by a man), but I verily believe that salmon were as plentiful in them then according to the size of the stream as they ever were in any of your waters of British Columbia. Now, let me relate the state of things as far back as in 1868. Barely a salmon could then be found in any of these same streams; over-fishing, constantly killing them on the spawning grounds, trap-net fishing along the shores of the lake and estuaries of the streams, excessive demand and greed for the fish had exterminated them in all our waters. This has also been the case in a large proportion of the rivers in Quebec, and also to a certain extent in a great many of the rivers in the other maritime provinces.

Now you are having a "merry life" in your new province with the salmon; but I fear it must be a "short one," and a much shorter one than ours has been; for with the increasing population of the earth, with their craving demand for supplies of fish-food, the immense capital invested in capturing salmon, the improved methods in the way of nets and other engines used in killing them; all these things (with what I have witnessed in my own province here) prove to my mind, at least, that unless the most stringent remedial measures are adopted in your province, your present traffic in salmon will be of short duration, and will be brought to a close

in a much shorter period of time than ours has been. It may be asked what should be the remedy to prevent this reasonably expected loss of a great commercial wealth? I may answer that much discretion and wisdom will have to be shown by those who are engaged in the trade, and by assisting the proper authorities in maintaining proper fishing regulations, set apart a proper close season for the natural spawning of the fish, and see that it is kept to the very letter; aid nature by every possible means, and subsidize upon an extensive scale the natural methods of reproduction by the application of the most improved means of artificial propagation. There are, no doubt, immense numbers of small tributary feeders to your large rivers now unfrequented by salmon, which might be made the nurseries for millions of young salmon, if placed there, thus extending, as it were, the "branches of the tree for the rearing of more fruit," to be brought to maturity afterwards by the unlimited supplies of food in the great expanse of the ocean.

I have digressed perhaps too much from the main object of your inquiry; but I have inferred from the request in your letter to me that you take a deep interest in all that pertains to the natural and artificial propagation of salmon; hence my somewhat lengthy letter in reply. In answer to your direct question "whether should the young fish when they are old enough to take care of themselves be turned into the headwaters of the river, or ought they to be confined in ponds fed by living water until the time arrived for their dismissal to the ocean," my experience tells me that it is next to an impossibility to rear young salmon up to the stage of "smolthood" (that is, the period when they commence their migration) in large numbers in ponds or confined limits. The system may do well enough on a very small scale, and for purposes of observation, but when "millions" are to be hatched out it is impracticable. Young fish as well as old ones require food, and of the proper kind. They also require large supplies of highly aerated water, which as a rule cannot be obtained in ponds or confined limits. They also feed largely in their natural abodes on insect life, the larvæ of flies, and crustaceans, which in the gravelly bottomed parts of rivers where the young salmon are hatched out, are always found in great abundance. In ponds, artificial feeding, or animal food, in the way of livers and such like, must be given them, and, as I before stated, when you have "millions" to care for, large quantities of this food must be prepared for them by pounding, grinding or some such means, in order to make it sufficiently small for the small fry to take in their mouths. This with a few thousands is laborious work, and still worse and more difficult is it to get this food at all times, unless the work is carried on in the immediate vicinity of some large town or city, where the offal from butchers' stalls can be readily and regularly had (for it must always be fresh or at times thousands of your young brood will turn sick and die from eating partly decomposed and diseased livers) and taken from healthy animals.

I have lost thousands of young fry from feeding upon what I afterwards found out to be diseased livers of cattle, which, at the time is not easily discernible, and not until perhaps thousands of your brood of the fry have died. I have no hesitation in advising you or any other person (on this subject) not to think of keeping large quantities of salmon fry in small quarters where it will be necessary to feed them artificially. At least two seasons will transpire before young salmon will put on the livery of the "smolt" and migrate to sea. If a few months keeping would bring them to this stage it would be different; but two long years or seasons of confinement and artificial feeding will prove unwholesome for the fish and unprofitable to those persons engaged in the work of rearing salmon.

I have been getting for some years back a number of the "ova" of the California salmon from the McLeod River, a tributary of the Sacramento. They are known as the "salmo quinnat" to distinguish them from our Atlantic salmon, the "salmo salar." The "quinnat" are more greedy feeders when young than the "salar" and are a much coarser fish in every way, not liked so well for the table as they are for canning purposes. The introduction of them here by myself and by Professor Baird in the Eastern States has not proved very satisfactory so far. They are not showing themselves in our waters as numerous as we had expected they would. I am now trying the planting of some 350,000 of the "quinnat" in the great St. John

River in New Brunswick. They will be distributed in the upper waters of the river some 200 miles from tidal water. The native "salar" of that river have become very scarce from the means alluded to in the former part of this letter. The St. John River many years ago was overflowing with salmon just like yours, but the slaughter of the fishermen and the improper times of killing them have well nigh exterminated them from the upper waters there.

I may state for your information that our Dominion Government is quite in advance of almost any other on this continent or the old world with regard to the artificial propagation of fish. I have now erected for the Government eleven fine extensive fish breeding establishments in various parts of the Dominion. Ten of these are for salmon culture more particularly, each having a capacity of from three to six millions of eggs. The eleventh one is more particularly erected for breeding the "corregoni" (our whitefish); its capacity is some sixty millions of eggs, or even more if procurable. I am now putting up the twelfth building on the Restigouche, size 40 x 100, which will accommodate 8,000,000 or 10,000,000 of salmon eggs. We have at the present time about "thirty millions" of eggs of the salmonoid family laid down in the troughs of these eleven hatcheries. We have turned out from these nurseries since their commencement (some of them being in operation only one year, others two, and so on) "ninety-seven millions" (97,000,000) of young fish "all of the salmon family." This number has not been approached by any other country, unless shad are counted in, which are hatched out in about 3 or 4 days, whereas the salmon family take from four to six months in their incubation. I simply mention these figures to show you that whilst France, Germany, England and the United States are being heralded by their institutions and Government organs as doing wonders in fish culture, Canada has been quietly, yet surely, out-doing them by all odds.

Our last annual grant for carrying on this work including keepers' salaries, general maintenance and the erection of two new hatcheries, last year was \$28,000. I am told that the United States Government gave \$150,000 for a like purpose last season.

I should be very much pleased to see our work extended to your province * * * A small grant of \$3,000 or \$4,000 would put you up a hatchery with a capacity of six to ten millions of eggs. This sum would cover everything, even though a competent officer were sent for the purpose of constructing it. * * * When I say \$3,000 or \$4,000 I mean a building of first-class style in appearance, with every facility and comprising in it all the latest and most approved methods for artificial propagation, with apparatus, etc.

If you (the parties engaged in fishing operations) are going to put up an establishment on your own account be very careful in your selection of a site and in the manner of putting it up, as almost everything relating to it is in selecting a good convenient location and in fitting up the nursery with good apparatus and a systematic way.

I have now written you on this subject of fish culture somewhat lengthily. I hope it may interest you, not tire you. I wish you every success in your undertaking.

With best respects, I am yours, very truly,

SAMUEL WILMOT.

Food of the Indian Population.

2. Another important reason for guarding against a diminution of the salmon supply exists in the fact that a large Indian population depends upon it as its main article of support. This does not apply only to the Indian residents on rivers, but also to those on the coast, on islands, and in parts of the interior, as the river Indians catch and dry large quantities of salmon which they barter with other Indians who cannot obtain this essential article for themselves, and should salmon become extinct in the rivers, or be so seriously reduced in quantity as to cause destitution among the Indian population, it would be a serious matter for the Government to provide means of support for those Indians.

3. The Committee, in view of the foregoing, recommend that the Dominion Government be urged in the strongest manner possible, to adopt immediate and effective measures against over-fishing and the consequent inevitable diminution and possible exhaustion of the salmon fisheries.

Regulations have already been made by which a close time of 30 hours in each week is prescribed, but the opinion of many fishermen and persons conversant with the habits of salmon is, that those regulations do not afford the requisite protection, owing to the uncertain and irregular movement of the fish towards the spawning ground. To extend the close time would be highly detrimental to the fishing industry, as the runs of fish are limited to short periods, of which canneries must take the utmost advantage in order to make the business profitable.

Hatcheries, when fully established under government supervision, would probably be the means of maintaining the salmon supply unimpaired; but no hatcheries have yet been established in the province, and even were they established at once, some years would elapse before they could be effective.

As the regulations pertaining to a close time for fishing do not afford the protection necessary, and the establishment of hatcheries has not even been considered by the government, the committee are of opinion that a scheme (having due regard to the vested interests) of granting licenses, by which the number of fisheries in the different rivers and fishing places would be regulated and placed under the control of the government, would best meet the case until hatcheries of the necessary productive capacities have been established.

The committee suggest that:—

(a.) The power of granting licenses should rest with the board consisting of the Lieutenant-Governor, the Inspector of Fisheries for the province, and the Indian commissioner;

(b.) That fishing with nets, seines, or other appliances should not be permitted in any of the rivers, or approaches to rivers, or inlets of the province except by license, and that the infringement of any of the regulations which may be framed should entail confiscation of fishing appliances, besides severe penalties;

(c.) Licenses to be granted yearly;

(d.) The cost of licenses to be a nominal sum, say not exceeding \$20 or \$25, for each establishment.

Victoria, B.C., 20th January, 1882.

MATTHEW T. JOHNSTON,
THOMAS EARLE,
J. H. TURNER,

Committee.

The foregoing report was adopted at a special meeting of the board on the 13th January, 1882.

(Signed)

EDGAR CROW BAKER,
Secretary.

On the 26th November, 1888, the following regulations were adopted:—

SALMON FISHERY.

1. Fishing by means of nets or other apparatus without leases or licenses from the Minister of Marine and Fisheries is prohibited in all waters of the province of British Columbia.

Provided always that Indians shall, at all times, have liberty to fish for the purpose of providing food for themselves, but not for sale, barter or traffic, by any means other than with drift-nets, or spearing.

2. Meshes of nets used for capturing salmon shall be at least six inches extension measure, and nothing shall be done to practically diminish their size.

3. (a.) Drifting with salmon nets shall be confined to tidal waters, and no salmon net of any kind shall be used for salmon in fresh waters.

(b.) Drift nets shall not be soused as to obstruct more than one-third of any river.

(c.) Fishing for salmon shall be discontinued from six o'clock a.m. on Saturday, to six o'clock a.m. on the following Monday, and during such close time no nets or other fishing apparatus shall be set or used so as to impede the free course of fish, and all nets or other fishing apparatus set or used otherwise shall be deemed to be illegally set and shall be liable to be seized and forfeited, and the owner or owners or persons using the same shall be liable to the penalties and costs imposed by the Fisheries Act.

4. (a.) Before any salmon net, fishing boat, or other fishing apparatus shall be used, the owner or persons interested in such net, fishing boat or fishing apparatus shall cause a memorandum in writing setting forth the name of the owner or person interested, the length of the net, boat, or other fishing apparatus and its intended location, to be filed with the Inspector of Fisheries, who, if no valid objection exists, may, in accordance with instructions from the Minister of Marine and Fisheries, issue a Fishery license for the same, and any net, fishing boat, or fishing apparatus used before such license has been obtained, and any net, fishing boat or fishing apparatus used in excess or evasion of the description contained in such license shall be deemed to be illegal and liable to forfeiture, together with the fish caught therein; and the owner or person using the same shall be also subject to fine and costs under the Fisheries Act.

(b.) All salmon nets and fishing boats have the name of the owner or owners legibly marked on two pieces of wood or metal attached to the same, and such mark shall be preserved on such nets or fishing boats during the fishing season in such manner as to be visible without taking up the net or nets; and any net or fishing boat used without such mark shall be liable to forfeiture.

5. The Minister of Marine and Fisheries shall, from time to time, determine the number of boats, seines, or nets, or other fishing apparatus to be used in any of the waters of British Columbia.

TROUT FISHERY.

No one shall fish for, catch, or kill trout from the 15th October to the 15th March, both days inclusive, in each year.

Provided always that Indians may, at any time, catch or kill trout for their own use only, but not for the purpose of sale or traffic.

Resolutions passed the British Columbia Board of Trade, on the 22nd March, 1888, representing a necessity for additional protection. The supply of salmon on the Fraser River was threatened with exhaustion, owing to over-fishing, and it was urged that more stringent regulations than the existing ones were needed in order to preserve this industry and avert the dangers which already threatened the Sacramento and Columbia rivers. The board also recommended that some restriction be placed on the export of fish. After carefully considering the matter, the regulations of 26th November, 1888, were submitted to, and concurred in, by the Inspector of Fisheries, resident in British Columbia, and subsequently were approved by the Governor General in Council.

Objections were at once presented by the Board of Trade, and by others employed in canning on the Fraser River. These objections were as follows:—

1. Cannery object to fixing the mesh of salmon nets at 6 inches, and assert that this is too large for practical purposes, owing to the average small size of some species of salmon which enter the Fraser River, and they claim that it should be fixed at $5\frac{3}{4}$ inches. Although a mesh of 6 inches might appear to be somewhat large for certain kinds of salmon, this measure was deemed too small, since it would kill large numbers of undersized fish. When wet, the size of a net having meshes of 6 inches, was practically reduced to $5\frac{3}{4}$ by shrinking.

2. Objection was also taken to the regulation which provided that no nets should be used so as to bar more than two-thirds of a river, it being deemed that such a provision was unnecessary; that fishing could not be profitably carried out

under it, as fish would have so much room to escape, that there should be no chance of catching any, and that one-third of the river was sufficient for all practical purposes. Leaving two-thirds of a channel of a stream open for the passage of fish is, however, a wise provision. It gives the upper settler a chance of taking a few for themselves, while it permits a reasonable number of salmon reaching their spawning beds. This provision has always been on the statute-books. It formed part of the British Columbia regulations of 1878, and experience had proved everywhere—in England, as well as in this country—that it was necessary. This regulation was also approved by the Inspector of Fisheries.

- 3. The regulation fixing a weekly close time from six o'clock on Saturday morning till six o'clock on Monday morning, was objected to by the canners, and a return to the old system, from Saturday noon to Sunday night, was demanded. This weekly close time was alleged to be unnecessarily long; it would, it was said, conduce to laziness, gambling, and drunkenness; diminish the profits of all parties, &c., &c. Finally, the canneries claimed that a weekly close time of 36 hours was ample to allow of immense numbers of salmon ascending the rivers to spawn.

It is to be observed that no general close season for salmon exists in British Columbia as in the maritime provinces; fishing is carried on from February till November, and that the weekly close time enacted by the regulation of 26th November, 1888, was the only period during which salmon could avail themselves of a free passage to resort to the upper portions of streams, or visit the spawning beds for the purpose of breeding.

In the maritime provinces, salmon fishing does not last two full months. In addition to a weekly close time of 36 hours, there is a close season of ten months, when no fishing whatever can be carried on, while in British Columbia, with no general close season at all, fishing can be carried on during eight months of the year.

Much attention appears to have been given to the Columbia River during the past years by citizens of the United States in order to arrive at some mode of fostering its salmon fisheries and preserving this valuable industry in that country. The pack on the Columbia River which amounted to only 4,000 cases of 4 dozen cans, in 1866, grew to 629,000 in 1883. The number of fishermen, of fishing implements, and of canneries, correspondingly increased every year, yet the yield has regularly and persistently fallen since 1883, as shown by the following figures:

In 1883 the pack amounted to 629,000 cases.

1884	do	620,000	do
1885	do	554,750	do
1886	do	448,500	do
1887	do	354,055	do
1888	do	372,000	do
1889	do	328,000	do

or a decrease of nearly 50 per cent, due to over-fishing and want of protection. Columbia River water was noted for the immense volume of its current, its purity and its freedom from sedimentary matter; the only plausible cause for the extraordinary decline of its salmon fishery is over-fishing. In a report presented to the Senate, by Major Jones, United States Army, on the 26th January, 1888, it is recommended "to prohibit all methods of fishing during two consecutive days of each week, during the whole year; thus allowing more fish to reach the spawning grounds and at the same time keeping the market supplied with fresh salmon throughout the year."

TESTIMONY TAKEN BY THE SELECT COMMITTEE OF THE UNITED STATES SENATE ON RELATIONS WITH CANADA.

TESTIMONY OF E. B. BECK, SAN FRANCISCO, SALMON PACKER, (PAGE 126).

By Senator Hale :

Q. How does the salmon compare with the eastern salmon?—A. The Californians say it is the finest fish in the world. The eastern man says it is of no account. That is the way it stands.

Q. Where do you find your market?—A. In the United States and Europe and Australia.

Q. Dealing now with the salmon question, what proportion of that canned salmon product is sent east in the United States?—A. Last year it was probably nearly 600,000 cases, distributed throughout the United States.

Q. What proportion is sent to foreign markets?—A. About 400,000. When speaking of the number of cases, I include the fish also packed in British Columbia; I said, "on this coast."

Q. Where is that fish caught?—A. It is caught in the Fraser River, the Skeena River, and in the inlets.

By Senator Pugh :

Q. Then there is a competing trade between British Columbia and Alaska?—A. Columbia River packs the larger portion of the fish. Columbia River packed last year 435,000 cases. There are other canneries up and down the coast that pack more or less.

By Senator Hale :

Q. By what means do you transport east?—A. By rail.

Q. By what roads?—A. Last year we were able to send by the Canadian Pacific for 95 cents per hundred weight, because they had some concession from the Transcontinental Association whereby they accepted 5 cents less per hundred weight.

Q. What was the result of that in the amount you shipped by that road?—A. We did not ship very much by that road, from the fact that it was handled too often to get the fish there in good order. We preferred shipping in our own way.

Q. So that it was considered that the disadvantage of too much handling offset the reduction in price?—A. Yes, sir. Afterwards the Northern Pacific came into the same arrangement, and all our salmon were shipped from Astoria direct by the Northern Pacific.

Q. Are you making your shipments mainly by the Northern Pacific?—A. Yes, sir; from Astoria to the east.

Q. Will you present to the committee any views that you have upon this business of yours that indicate that it would be in any way affected, or how it is at present affected by our relations, freight or otherwise, with Canada?—A. The Canadian people are very poor, not well-to-do.

Q. You are speaking now of Western Canada, British Columbia?—A. Yes, sir; where I have been more particularly. The consequence is that they have produced in the last five years in British Columbia 800,000 cases, and we have produced 4,200,000 cases of salmon. They cannot use what they produce at all, and so they ship it to England and to Eastern Canada.

By Senator Pugh :

Q. You mean the British Columbians?—A. Yes, sir. They are so poor that they do not indulge in canned salmon; it is a luxury. The consequence is that their catch all goes abroad. We cannot see from our standpoint where we would have any particular advantage in having reciprocity. We have a cannery, as I said, on Fraser River. When we wish to bring that salmon here we have to pay 25 per cent

ad valorem, which is about 35 cents a dozen; of course we cannot bring it here; we do not want it here, because we can get a better price for our salmon that we get here, from the fact of having no outside competition. In England our salmon stands equal with theirs. We shipped this year to England about 400,000 cases, of which 100,000 cases were packed in British Columbia, and 70,000 cases were sent to Canada East. We did not send a case of American fish into Canada, and never have done so, except when a man wanted a special brand or something of that kind.

Q. Canada is no market for your fish?—A. It is no market for our fish.

Q. Can you see that if you had reciprocity you would gain anything from Canada for any product of your trade?—A. No, sir; their surplus would come here, but there would be no use of our taking our surplus there because they have more of their home manufacture than they can use.

Q. So there would be no reciprocity really?—A. No, sir.

Q. It would be giving an advantage and receiving none in return?—A. That is the idea. In British Columbia there are no large towns. Victoria is the largest town, containing about 15,000 inhabitants. Outside of that the towns are very small places.

Q. Are there any such conditions on the other side of the line, in British Columbia, as exist upon this side, in the way of increased immigration, taking up land, building mills, the introduction of one kind of business and another, such as is going on here? Does that condition of things exist on the other side to any extent?—A. No, sir; the lands on the other side, except in some of the deltas of the Fraser River, Burrard's Inlet, and the Skeena River, and those deltas are very fertile, they are taken up, and there are quite extensive farms or ranges there. But the balance of British Columbia that I have had the pleasure of seeing, I would not give \$1.50 a mile for.

Q. You do not want it?—A. No, sir; not at any price. It has fine lumber interests. The great amount of timber there will naturally attract people there, of course, to turn it into lumber. But independently of that, so far as the salmon-cannery business up there is concerned, there are now more salmon canneries there almost than there are fish. They stick them in there wherever they can. Every man who has an iron kettle, almost, establishes a cannery there, and Senator Dolph can testify that such establishments are scattered all the way up and down the Columbia River. There are some canneries, of course, that are well backed financially and that are doing a good, safe business. On the Fraser River, thirteen years ago, they canned and packed 9,000 cases. In 1883, they packed 255,000 cases. Then they ran down from that to 160,000. Last year they packed 205,000. The fish commissioners of Canada are very strict, and take an account of every man's cannery and just what he does. They don't take his word for it, but they take it for themselves. They are very particular about these things. I don't see any possibility of any great increase.

By Senator Pugh:

Q. Are the British people in Canada doing any business in the salmon trade from British Columbia with Alaskan ports?—A. No, sir; I don't know of a single party up there.

Q. There is no trade between British Columbia and Alaska in fish?—A. No, sir; except last year there was one vessel that came down as far as Burrard's Inlet and took salmon overland by the Canadian Pacific. That was the only one. That was shipped in bond through the United States.

Q. Then that trading on the Pacific coast is confined to Americans almost exclusively?—A. Yes, sir. There have been packed on the Pacific Coast during the last four or five years five million cases of salmon, and of that they have furnished about 800,000 cases.

Q. Who furnished that?—A. British Columbia.

Q. You say that these canneries outside of British Columbia are owned by Americans exclusively?—A. Yes, sir.

Q. And that this product on this coast, outside of British Columbia, is the product of American canneries?—A. Yes, sir; entirely.

Communication from the Chamber of Commerce of Port Townsend, Wash.

CHAMBER OF COMMERCE.

Port Townsend, Wash., May 21st, 1889.

HON. GEORGE F. HOAR,

Chairman of Senate Committee on Relations with Canada :

SIR,—The Chamber of Commerce of Port Townsend being aware of the great honour conferred on this city by the presence of a Committee of the Senate of the United States on Relations with Canada, are desirous of respectfully asking your attention to a few matters which we deem of public importance to the nation at large, to the Pacific States in general, to the new state of Washington in particular, and in an especial manner to the city of Port Townsend.

Understanding that your committee desire to give especial attention to the fisheries of the Pacific Coast, a subject of peculiar importance to the state of Washington, we gladly avail ourselves of this opportunity to express our views of the value of an industry which, when developed, will prove a source of lucrative profit to our citizens and the means of supplying a cheap and nutritious article of food to our people.

The waters of the North Pacific Ocean, Behring Sea, and the Arctic Ocean, as well as the rivers which run into them, teem with animal and fish life beyond the limit of human calculation ; the ocean furnishes whale, walrus, sea-elephant, sea-lions, hair and fur seals, true cod, ling-cod, black-cod, halibut, herring, and other varieties, and the rivers abound with salmon, sturgeon, trout, and other fish of lesser note. The only fisheries of importance yet established are the salmon, of which great quantities are taken and canned for export in the Columbia River, Puget Sound and Alaska. But the great ocean fisheries have not been developed. There are two causes which at present tend to paralyze this business ; one is the extortionate price charged by the railroads for transporting fish to the interior and across the continent, amounting at present to nearly prohibitory rates, and another is that the fishermen are disheartened by being prohibited from pursuing their avocations in Behring Sea. They demand that the same rights be given them in the Pacific that they enjoy in the Atlantic, and that the Government, instead of prohibiting them from visiting Behring Sea and taking whales, seals, fish, or any product of the ocean that may yield a profit, should offer every encouragement and inducement for American fishermen to fish and hunt in American waters or on the high seas.

We do not believe that the lease of the " Pribyloff Islands and adjacent waters " ever was meant or intended to mean the whole waters of Behring Sea, but that the limit of one marine league from the shore is the recognized limit, outside of which the waters are known to the civilized world as the high seas, where our citizens should be encouraged to pursue their avocations of fishing and hunting.

It is shown by the report of Government officials in the publications of the Tenth Census that the destruction of fish life by seals, sea-lions, and other animals whose sole food is fish is very largely in excess of the amount of fish taken by the whole of the fisheries of the United States, and to protect these ravenous animals is to cause the destruction of enormous quantities of nutritious food which should be utilized as a means of supporting the lives of the millions of people of these United States.

The chamber of commerce consider that the order of the Government by act of Congress closing the Behring Sea is an act not for the benefit of the people to secure them a cheap article of food, but is for the sole benefit of a single monopoly to enable them to supply articles of luxury for the fashionable clothing of the rich. We believe this act of Congress to be a species of class legislation for the benefit of the wealthy few, and as such is opposed to the principles of sound public policy, and we protest against its further continuance.

We see the anomalous condition presented to us, that while the Government of the United States on the one hand is expending large sums of money for the propagation of fish and encouraging the fishermen of the Atlantic to procure a constant

supply of food fish for our people, they are at the same time protecting one of the most destructive elements that prey upon these fish, and protecting this element, not for the public good, but for the private gain of a single corporation. Our fishermen ask that they be encouraged and protected in all American waters and on the high seas; and as this chamber of commerce believes that the development of our fisheries will add greatly to the wealth of the nation, while it will afford a valuable supply of nutritious food, we join with our fishermen in urging their request that they may be allowed to take any of the products of the ocean, and that they may go into all American waters in pursuit of their legitimate and honourable business.

"The magnitude and importance of the possibilities of the fisheries of the Pacific are not as well understood among the people of the Pacific States generally as those interested of the Atlantic are among the people of the New England States. The cost of transportation to the markets of the interior necessarily limits the fisheries trade to the San Francisco market, where the demand is mostly for home consumption, and to the few towns and cities along the coast. But when the American fisherman can have free access to Behring Sea and all American waters, and are encouraged by the Government as the fishermen of the Atlantic now are, and when the products of these ocean fisheries can be cheaply transported to interior and eastern markets, a trade will be created of great importance to the State of Washington which will prove an important factor in the earnings of the railroad, which by its cheap cost of transportation can secure the carriage of this freight. But to secure this great benefit to our people, a benefit which is now enjoyed by the fishing industries of the Atlantic, the policy of the Government must be changed. Behring Sea must be declared free and open to all our citizens except the adjacent waters to the Pribyloff Islands, which should not exceed in limit the distance from the shores of those islands of one marine league, inside of which limit the seals should be preserved during the months of breeding, as belonging to the rookeries owned by the United States, but outside of that limit the waters should be free to all of our citizens.

OUR RELATIONS WITH BRITISH COLUMBIA.

The Chamber of Commerce also respectfully asks your attention to the relations now existing between this Territory and British Columbia, and the necessity of continuing the present friendly intercourse. On the Atlantic side, after passing the north-eastern boundaries of the State of Maine, the whole region is foreign country. On the Pacific side we find an entirely different condition. Washington Territory till our acquisition of Alaska, was the north-western boundary of the United States as Maine is its north-eastern. But we now find that instead of the whole region north of us being a part of the Dominion of Canada we have the great Territory of Alaska, between which and Washington Territory, the province of British Columbia is, as it were, sandwiched, making it necessary for us to pass through the waters of that province in our intercourse with Alaska. All the vessels carrying freight, passengers and mails, and all tourists have to take the inside passage, and pass through the possessions of a foreign nation.

The interests of the Pacific coast from San Francisco to Alaska are identical; our relations with British Columbia, and in particular with the cities of Victoria, Vancouver and New Westminster, and other places, are most cordial and friendly, and it is the desire of this Chamber of Commerce that these relations be encouraged by our Government for the benefit of our people. The completion of the Canadian Pacific Railroad has been a direct benefit to the people of Port Townsend by relieving them from the extortionate charges with which they have been oppressed by the officials of the Northern Pacific Railroad. A still further benefit is expected will be derived from the construction of the Canadian Western Railway, a corporation created by Act of the Legislature of British Columbia at its session in April, 1889, which, starting from a point in connection with the system of the Grand Trunk Canadian line at Alberta, will pass through the Peace River and Chilcotin region to the Bute Inlet route, crossing at Seymour Narrows to Vancouver Island, thence to Nanaimo and Victoria. It is intended to have a through connection by this route

from Victoria, British Columbia, to Portland, Me. From Victoria it is proposed to cross the Strait of Fuca by steam ferry boats to Port Townsend, and by means of the Port Townsend Southern Road to Portland, Oregon, to secure direct transit for passengers to San Francisco and San Diego, Cal., and with all the continental railroads to the Atlantic.

"But while this chamber of commerce is fully aware of the direct benefit it will be to Puget Sound, and to Port Townsend in particular, to have this system of foreign railroads in competition with the rates now charged by all the American continental lines, they are fully alive to a knowledge of the cause which enables the Canadian roads to offer lower rates than the American, and that cause is the subsidies received from the Imperial Government of Great Britain for steamship lines from Vancouver to Japan and China, which enables them to secure a greater portion of the tea and silk trade, and in reality to secure nearly the entire trade of the Indies. All the great nations of the world—England, France, Germany, Russia, Italy, and others—give generous subsidies to their shipping. The United States alone stands aloof, and, as a consequence, the flag of our country is seldom seen where formerly it ruled, and our commerce is given to the merchant vessels of foreign nations. We believe that if the policy adopted by Great Britain with regard to subsidies should be emulated and adopted by the United States the same beneficial results to our commerce would ensue; and to this end we respectfully ask your earnest attention and co-operation."

There were only three canneries in operation in Canada, during the year 1876, and the number had increased to fifteen in 1878, and the quantity of canned salmon represented by 9,847 cases in 1876, had increased to 203,916 in 1877; an increase of twelve canneries, and of 194,069 cases in the quantity of salmon canned. While the total pack of British Columbia salmon was 9,795,984 cans in 1887, that for 1888 amounted only to 8,883,944; a decrease of 962,040 cans.

Viewing the above facts with alarm, the Minister of Marine and Fisheries believed that he would have been justified in ordering a strict enforcement of the regulations; but having taken into consideration the strong appeals and the arrangements already made for the year's business; he recommended that the coming into operation of the regulations of 26th November, 1888, be suspended until the fishing season of 1890.

This recommendation was approved by Order in Council of 17th March, 1889.

During the month of December, 1889, a delegation of British Columbia canners visited Ottawa, to urge their views touching the regulations of 1888. The delegation, among other matters, urged that no limit be placed upon the number of licenses issued; that the weekly close time be fixed at 48 hours; that the regulation respecting fish offal be not enforced, and that the size of mesh of salmon nets be reduced to $5\frac{3}{4}$ inches. The views of the delegation were submitted for the opinion of the local inspector of fisheries, and after careful consideration of the whole subject, the Minister submitted the following regulations, which were approved by Order in Council of the 14th March, 1890:—

SECTION 1.

Salmon Fishery.

1. Fishing by means of nets or other apparatus without leases or licenses from the Minister of Marine and Fisheries, is prohibited in the waters of the province of British Columbia.

Provided always that Indians shall at all times have liberty to fish for the purpose of providing food for themselves, but not for sale, barter or traffic, by any means, other than with drift nets or spearing.

2. Meshes of nets used for capturing salmon shall be at least five and three-quarter inches extension measure, and nothing shall be done to practically diminish

their size: provided always that the Minister of Marine and Fisheries may order larger meshes to be used at such times and places as may be in his opinion necessary for the protection of the Fisheries.

3. (a.) Drifting with salmon nets shall be confined to tidal waters, and no salmon net of any kind shall be used for salmon in fresh waters.

(b.) Drift nets shall not be used so as to obstruct more than one third of any river.

(c.) Fishing for salmon shall be discontinued from 6 o'clock p.m. on Saturday to 6 o'clock a.m. on the following Monday, and during such close time no nets or other fishing apparatus shall be set or used so as to impede the free course of fish, and all nets or other fishing apparatus set or used otherwise shall be deemed to be illegally set and shall be liable to be seized and forfeited, and the owner or owners or persons using the same shall be liable to the penalties and costs imposed by the Fisheries Act.

4. (a.) Before any salmon net, fishing boat or other fishing apparatus shall be used, the owner or persons interested in such net, fishing boat or fishing apparatus shall cause a memorandum in writing setting forth the name of the owner or person interested, the length of the net, boat or other fishing apparatus and its intended location, to be filed with the Inspector of Fisheries who, if no valid objection exists, may, in accordance with instructions from the Minister of Marine and Fisheries, issue a fishery license for the same, and any net, fishing boat or fishing apparatus used before such license has been obtained, and any net, fishing boat or fishing apparatus used in excess or evasion of the description contained in such license shall be deemed to be illegal and liable to forfeiture, together with the fish caught therein, and the owner or person using the same shall be also subject to fine and costs under the Fisheries Act.

(b.) All salmon nets and fishing boats shall have the name of the owner or owners legibly marked on two pieces of wood or metal attached to the same, and such mark shall be preserved on such nets or fishing boats during the fishing season in such manner as to be visible without taking up the net or nets; and any net or fishing boat used without such mark shall be liable to forfeiture.

5. (a.) The Minister of Marine and Fisheries shall from time to time determine the number of boats, seines, or nets, or other fishing apparatus to be used in any of the waters of British Columbia.

(b.) The total number of licenses for salmon fishing in the Fraser River shall be limited to 500, and of this number 350 shall be allotted among the canneries in operation on the Fraser River in the season of 1890, the allotment thereof to be based, in the cases of the old canneries, upon their average respective packs of the last three seasons, and in those of new canneries upon the estimate of the Inspector of Fisheries, of the reasonable working capacity of such new canneries.

For all licenses up to twenty, inclusive, a fee of twenty dollars each shall be charged, and for any number in excess of twenty, which, under the proposed allotment any cannery may be entitled to take up, a fee of \$50 for each license shall be charged. Should any of the 350 licenses, above referred to remain unissued, they shall be allotted on the basis already stated, to the canneries applying therefor, at a fee of \$50 for each license, and in case there should not be a sufficient number to permit of this being done, they may be issued by the Inspector of Fisheries, in such manner as he deems equitable upon payment of the last mentioned fee; the remaining 150 licenses to be issued at \$5 per license to the proprietors of freezers on the river and to fishermen, as the Minister of Marine and Fisheries may authorize, no fisherman, however, to receive more than one license.

SECTION 2.

Trout Fisheries.

No one shall fish for, catch or kill trout from the 15th October to 15th March, both days inclusive in each year. Provided always that Indians may, at any time, catch or kill trout for their own use, but not for the purposes of sale or traffic.

On a report from the superintendent of fish culture, representing that owing to their injurious effect the use of seines for the purpose of catching salmon should be prohibited in the waters of British Columbia, in the same manner as in other parts of the Dominion; the above regulations were amended by the addition of the following clause:—

"The use of seines for the purpose of catching salmon is prohibited in the waters of British Columbia."

These are the regulations now in force.

On the whole, and with comparatively few exceptions, it may be said that the law and the regulations applicable to the protection of the fisheries have been fairly complied with. Taking into account the large number of men employed and the interests of fishermen and canners, few violations of the law have occurred, many of these were speedily detected and punished. As a rule, the fishermen of British Columbia are a law-abiding class. They seem to recognize the importance and necessity of judicious restrictions for the maintenance of the valuable industry in the success of which they are primarily interested.

The greatest difficulties experienced in past years were with those owning canneries.

Mr. Anderson was succeeded by Mr. Geo. Pittendreigh, in 1884, who held the office until April, 1886.

On the 1st July, 1887, Mr. Thos. Mowat, of New Westminster, who had had considerable experience in salmon fishing on the Bay des Chaleurs, was appointed in Mr. Pittendreigh's place. He occupied the position until his death, which occurred in September, 1891.

Mr. John McNab, of New Westminster, was then appointed as Mr. Mowat's successor, and is the present inspector of fisheries.

STAFF.

The staff of officers now employed for the protection of the fisheries of British Columbia, consists of one inspector for the whole province, and 14 guardians located as follows:—

- 4 on the Fraser River.
- 2 " Skeena "
- 2 " Naas "
- 1 " Courtney River.
- 1 " Cowichan "
- 1 at Victoria and Esquimault.
- 1 " Rivers Inlet.
- 1 " Burrard Inlet.
- 1 " Mud Bay.

The special guardians are also employed, from time to time, at other places, as occasion may demand, principally during the close seasons.

THE GROWTH OF THE FISHING INDUSTRY OF BRITISH COLUMBIA.

In order to form some idea of the enormous growth of the fishing industry of British Columbia it would only be necessary to glance at the table on p. cxxxviii. It will be noticed that while the salmon fishery yielded only \$78,773 in 1876, it had increased to \$465,755 in 1877, and to the enormous sum of \$1,727,457 in 1892. The greatest yield, however, was in 1889, when the salmon pack reached \$2,414,655, and the total yield of the fisheries of the province rose to \$2,673,395. An industry of this magnitude is entitled to careful attention.

The following table shows the fisheries expenditure and revenue (fines, licenses, &c.) in each year since Confederation in British Columbia:—

STATEMENT showing the Amount of Revenue and Expenditure in British Columbia since 1872.

Years.	Revenue.	Expenditure.		
		General.	Fish Breeding.	Total.
	\$	\$	\$	\$
1872.				
1873.				
1874.				
1875.				
1876.	105			400
1877.				635
1878.				690
1879.				1,423
1880.	10			1,399
1881.				1,721
1882.	672	1,599		1,599
1883.	790	1,599		1,599
1884.	127	2,231	3,704	5,936
1885.	365	1,437	11,873	13,310
1886.	922	1,878	5,405	7,284
1887.	943	5,860	4,623	10,484
1888.	6,934	3,661	5,653	9,314
1889.	6,416	4,333	4,933	9,266
1890.	11,367	3,634	4,202	7,836
1891.	12,914	4,320	3,339	7,659
1892.	8,192	6,158	2,896	9,054

STATEMENT of the Value of the Fisheries of British Columbia between 1876
Department of

Kinds of Fish.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
	\$	\$	\$	\$	\$	\$	\$	\$
Salmon in cans	*72,164	436,667	736,138	395,882	400,781	1,063,656	1,402,835	1,079,606
do fresh, smoked.....		600	2,139	10,050	14,839	39,900	10,638	88,967
do salted.....	6,609	28,488	43,720	17,411	20,270	39,332	45,508	42,453
Herring.....		3,304	1,450	1,570	1,790	3,700	14,290	5,925
Trout.....					150	210	2,152	4,501
Sturgeon.....		125			3,200	4,216	4,782	4,137
Halibut.....			3,000	7,220	1,182	578	380	1,500
Oulachons.....			944	3,400	905	4,311	2,479	7,367
Oysters.....								
Clams.....								
Crabs and prawns.....								
Smelts.....								
Skill.....								
Tooshqua.....								
Rock cod.....								
Fur seal skins.....		25,650	43,168	101,500	164,700	164,242	178,750	93,400
Sea otter skins.....				5,600	4,200	6,000	8,500	4,800
Assorted or mixed fish.....	900	400	400	150	475	700	1,776	31,860
Fish oils.....	25,024	56,198	62,806	46,040	63,518	79,776	108,112	119,747
Fish products.....				114	324		2,250	300
Fish for home consumption.....		32,000	32,000	37,000	37,000	47,500	58,000	159,000
Total value.....	104,697	583,432	925,766	631,706	713,335	1,454,321	1,842,675	1,644,645

*These figures are taken from the Victoria Custom-house returns.

STATEMENT showing the Kinds and Values of Fish and Fish

Kinds of Fish.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
	\$	\$	\$	\$	\$	\$	\$
Salmon, smoked..... Lbs.			842	136	26	40	100
do canned..... "	70,696	393,380	584,573	294,555	297,083	896,005	1,152,586
do fresh..... "							16
do pickled..... Brls.	2,474	22,802	12,261	9,117	10,964	19,798	25,366
Codfish, &c., dry and salted..... Cwt.							5
Halibut, fresh..... Lbs.				743	927	307	213
Sea fish and other..... Brls.	900		818	297	185	1,697	131
Oysters, fresh..... "							
Furs or skins, marine animals.....					75,840	65,134	123,804
Herring..... Brls.		2,064				191	5,265
Other articles.....						118	2,753
Fish oil..... Galls.	31,433	5,594	34,999	12,562	15,959	30,920	23,146
Totals.....	105,603	423,840	633,493	317,410	400,984	1,014,210	1,333,385

and 1892, both years inclusive, as compiled from the Annual Reports of the Marine and Fisheries.

1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
\$	\$	\$	\$	\$	\$	\$	\$	\$
776,831	542,585	838,604	1,175,518	1,104,243	2,414,655	2,387,519	1,517,060	1,378,631
574,700	77,940	61,197	227,628	250,380	221,280	185,561	233,345	320,650
50,728	31,212	26,151	53,508	42,410	37,460	29,940	16,236	28,176
8,227	8,830	2,040	7,618	6,945	12,800	21,975	21,415	26,172
5,323	5,810	3,075	5,550	850	1,402	5,290	6,360	6,805
17,645	17,725	5,745	14,940	10,775	15,930	19,800	16,225	26,025
9,000	9,540	8,100	38,600	13,075	30,252	31,840	56,500	67,875
7,690	4,981	3,820	3,610	4,880	13,390	7,780	12,505	19,040
1,250	1,250	2,100	3,500	2,400	5,250	7,000	3,000	4,000
1,800	2,500	3,000	3,500	3,000	6,125	5,250	13,244	9,625
.....	2,000	2,500	4,500	7,500	10,750	30,240	30,200	30,000
.....	.....	760	.....	480	3,126	6,045	4,050	7,830
.....	.....	.....	.....	8,712	18,720	3,480	1,644	1,140
.....	.....	.....	.....	.....	13,417	15,450	22,475	20,815
.....	.....	.....	.....	.....	1,962	10,037	7,345	8,675
156,419	150,019	391,320	239,225	282,455	340,950	499,911	800,100	609,406
.....	.....	1,500	4,500	7,500	11,500	10,200	.....	2,100
13,132	15,622	11,940	42,600	24,418	16,136	21,901	21,100	22,041
28,923	26,024	20,496	50,090	32,172	70,710	81,132	124,750	129,046
.....	.....	.....	.....	.....	2,250	1,080	1,200	6,425
178,000	182,000	195,000	100,000	100,000	100,000	100,000	100,000	125,000
1,358,267	1,078,038	1,577,348	1,974,887	1,902,195	3,348,067	3,481,432	3,008,755	2,849,483

Products exported from British Columbia since 1877.

1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
\$	\$	\$	\$	\$	\$	\$	\$	\$
.....	.....	.....	.....	14	36	55	61	.....
798,351	504,335	405,898	601,806	917,996	750,002	2,067,368	1,741,287	1,253,382
.....	.....	.....	.....	3,368	751	3,379	6,825	14,750
15,304	31,933	15,875	13,823	29,991	20,692	11,856	10,125	1,017
.....	.....	.....	.....	.....	508	1,370	30	9
.....	.....	20	.....	162	198	164	220	12,038
507	66	41	223	388	23	147	621	60
.....	71	.....	.....	10	87	.....	38	5
70,178	164,592	211,096	287,377	202,779	209,584	290,396	513,471	1,060,227
.....	.....	.....	8	.....	.....	.....	.....	.....
14	.....	102	.....	4,569	4,724	5	1,976	9,525
15,017	26,675	10,015	7,322	4,737	7,018	.....	.....	.....
899,371	727,672	643,052	910,559	1,164,014	993,623	2,374,720	2,274,654	2,351,083

COMPARATIVE STATEMENT of the Yield of Salmon on the Fraser and Columbia Rivers.

Year.	Fraser River, Number of Cases of 4 doz. Tin Cans.	Columbia River, Number of Cases of 4 doz. Tin Cans.
1876.....	7,247	/ 450,000
1877.....	55,387	460,000
1878.....	81,446	460,000
1879.....	50,490	480,000
1880.....	42,155	530,000
1881.....	142,516	550,000
1882.....	199,204	541,300
1883.....	93,487	629,400
1884.....	38,437	620,000
1885.....	89,617	553,800
1886.....	99,177	448,500
1887.....	128,906	356,000
1888.....	76,616	352,000
1889.....	308,122	328,000
1890.....	244,637	499,000
1891.....	177,667	.....
1892.....	89,115	.....

The Board of Trade in Victoria contains among its members many influential gentlemen who operate the canning industry, and as the effort of the department was to regulate their work, it was obviously impossible to be guided by parties so interested. It was, however, always the aim to obtain the views of all, and to consult local opinion as much as possible.

With this object in view, Mr. Wilmot, in November, 1890, made a visit to British Columbia. His report will be found in the Annual Fisheries Report of 1890.

The cannors objected to this report, and asked for further inquiry.

Finally, under the terms of an Order in Council of August 25th, 1891, Hon. D. W. Higgins, Victoria; Sheriff W. J. Armstrong, of Westminster; and Samuel Wilmot, Superintendent of Fish Culture, were appointed Commissioners to inquire &c., and report.

Their report was published and laid upon the table of the House of Commons in 1893.

It shows a difference of opinion and contradiction as to important facts among the cannors, fishermen and residents.

The Commissioners differed as well, though on most important points they agreed.

This report has been carefully considered, and draft regulations are in preparation. Before further action, this draft will again be submitted for consideration in British Columbia, and the final criticism will be dealt with by this Government.

THE BEHRING SEA QUESTION.

The report for the year 1892 contained a review of this question up to the point of readiness for arbitration, stating that the Tribunal would meet at Paris, early in the present year.

The renewed *modus vivendi*, which was formally agreed to on the 18th April, 1892, having provided for the closure of the Behring Sea waters on the American side of the line of demarcation, described in the Treaty of Cession of 1867, until the end of October, 1893, the sealing vessels this year cleared with no uncertainty respecting their right to enter these waters.

So far as reported, this year, none of the Canadian sealers made any attempt to enter the prescribed waters, and no molestations of any nature have been encountered by them from the United States' cruisers.

Arbitration.

A preliminary meeting of the Arbitrators took place at Paris on 23rd February, but only to adjourn until 23rd March, when they met for despatch of business.

The constitution of this Court was as follows:—

H. E. the Baron Alphonse de Courcel, Senator of France, nominated by France: President.

H. E. the Marquis E. Visconti Venosta, Senator of Italy, nominated by Italy;

H. E. Monsieur Gregers Gram, Minister of State of Sweden and Norway, nominated by Sweden and Norway.

The Right Honourable Lord Hannen, Lord of Appeal; and

The Honourable Sir John S. D. Thompson, K.C.M.G., Prime Minister of the Dominion of Canada, nominated by Great Britain.

The Honourable John M. Harlan, Justice of the Supreme Court of the United States; and

The Honourable John T. Morgan, Senator of the United States, nominated by the United States.

The respective agents were:

The Honourable Charles H. Tupper, Minister of Marine and Fisheries of the Dominion of Canada, on behalf of Her Britannic Majesty.

The Honourable General John W. Foster, on behalf of the Government of the United States.

It was not until the 5th August, after discussions extending over a period of more than four months, that the award of the Arbitrators was delivered to the agents of the respective Governments.

The following is the full text of this award:—

[English Version.]

Award of the Tribunal of Arbitration constituted under the Treaty concluded at Washington, February 29, 1892, between the United States of America and Her Majesty the Queen of the United Kingdom of Great Britain and Ireland.

WHEREAS by a Treaty between the United States of America and Great Britain, signed at Washington the 29th February, 1892, the ratifications of which by the Governments of the two countries were exchanged at London on the 7th May, 1892, it was, amongst other things, agreed and concluded that the questions which had arisen between the Government of the United States of America and the Government of Her Britannic Majesty, concerning the jurisdictional rights of the United States in the waters of Behring Sea, and concerning also the preservation of the fur-seal in or habitually resorting to the said sea, and the rights of the citizens and subjects of either country as regards the taking of fur-seals in or habitually resorting to the said waters, should be submitted to a Tribunal of Arbitration to be composed of seven Arbitrators, who should be appointed in the following manner, that is to say: two should be named by the President of the United States; two should be named by Her Britannic Majesty; His Excellency the President of the French Republic should be jointly requested by the High Contracting Parties to name one; His Majesty the King of Italy should be so requested to name one; His Majesty the King of Sweden and Norway should be so requested to name one; the seven Arbitrators to be so named should be jurists of distinguished reputation in their respective countries, and the selecting Powers should be requested to choose, if possible, jurists who are acquainted with the English language;

And whereas it was further agreed by Article II. of the said Treaty that the Arbitrators should meet at Paris within twenty days after the delivery of the Counter-cases mentioned in Article IV., and should proceed impartially and carefully to examine and decide the questions which had been or should be laid before them as in the said Treaty provided on the part of the Governments of the United States and of Her Britannic Majesty respectively, and that all questions considered by the Tribunal, including the final decision, should be determined by a majority of all the Arbitrators.

And whereas by Article VI. of the said Treaty, it was further provided as follows:—

“In deciding the matters submitted to the said Arbitrators, it is agreed that the following five points shall be submitted to them in order that their award shall embrace a distinct decision upon each of said five points, to wit:

“1. What exclusive jurisdiction in the sea now known as the Behring Sea, and what exclusive rights in the seal fisheries therein, did Russia assert and exercise prior and up to the time of the cession of Alaska to the United States?

“2. How far were these claims of jurisdiction as to the seal fisheries recognized and conceded by Great Britain?

“3. Was the body of water now known as the Behring Sea included in the phrase “Pacific Ocean,” as used in the Treaty of 1825, between Great Britain and Russia; and what rights, if any, in the Behring Sea were held and exclusively exercised by Russia after said treaty.

“4. Did not all the rights of Russia as to jurisdiction and as to the seal fisheries in Behring Sea east of the water boundary, in the Treaty between the United States and Russia of the 30th March, 1867, pass unimpaired to the United States under that Treaty?

"5. Has the United States any right, and if so, what right of protection or property in the fur-seals frequenting the islands of the United States in Behring Sea when such seals are found outside the ordinary 3-mile limit?"

And whereas by Article VII. of the said Treaty it was further agreed as follows:—

"If the determination of the foregoing questions as to the exclusive jurisdiction of the United States shall leave the subject in such position that the concurrence of Great Britain is necessary to the establishment of Regulations for the proper protection and preservation of the fur-seal in, or habitually resorting to, the Behring Sea, the Arbitrators shall then determine what concurrent Regulations, outside the jurisdictional limits of the respective Governments, are necessary, and over what waters such Regulations should extend;

"The High Contracting Parties furthermore agree to co-operate in securing the adhesion of other Powers to such Regulations."

And whereas, by Article VIII. of the said Treaty, after reciting that the High Contracting Parties had found themselves unable to agree upon a reference which should include the question of the liability of each for the injuries alleged to have been sustained by the other, or by its citizens in connection with the claims presented and urged by it, and that "they were solicitous that this subordinate question should not interrupt or longer delay the submission and determination of the main questions," the High Contracting Parties agreed that "either of them might submit to the Arbitrators any question of fact involved in said claims and ask for a finding thereon, the question of the liability of either Government upon the facts found, to be the subject of further negotiation ;"

And whereas the President of the United States of America named the Honourable John M. Harlan, Justice of the Supreme Court of the United States, and the Honourable John T. Morgan, Senator of the United States, to be two of the said Arbitrators; and Her Britannic Majesty named the Right Honourable Lord Hannen and the Honourable Sir John S. D. Thompson, Minister of Justice and Attorney General for Canada, to be two of the said Arbitrators; and His Excellency the President of the French Republic, named the Baron de Courcel, Senator, Ambassador of France, to be one of the said Arbitrators; and His Majesty the King of Italy named the Marquis Emilio Visconti Venosta, former Minister of Foreign Affairs and Senator of the Kingdom of Italy, to be one of the said Arbitrators; and His Majesty the King of Sweden and Norway named Mr. Gregers Gram, Minister of State, to be one of the said Arbitrators;

And whereas we, the said Arbitrators, so named and appointed, having taken upon ourselves the burden of the said Arbitration, and having duly met at Paris, proceeded impartially and carefully to examine and decide all the questions submitted to us the said Arbitrators, under the said Treaty, or laid before us as provided in the said Treaty on the part of the Governments of Her Britannic Majesty and the United States respectively.

Now we, the said Arbitrators, having impartially and carefully examined the said questions, do in like manner by this our Award decide and determine the said questions in manner following, that is to say, we decide and determine as to the five points mentioned in Article VI., as to which our Award is to embrace a distinct decision upon each of them;

As to the first of the said five points, we, the said Baron de Courcel, Mr. Justice Harlan, Lord Hannen, Sir John S. D. Thompson, Marquis Visconti Venosta, and Mr. Gregers Gram, being a majority of the said Arbitrators, do decide and determine as follows:—

By the Ukase of 1821, Russia claimed jurisdiction in the sea now known as the Behring Sea, to the extent of 100 Italian miles from the coasts and islands belonging to her, but, in the course of the negotiations which led to the conclusion of the Treaties of 1824 with the United States, and of 1825 with Great Britain, Russia admitted that her jurisdiction in the said sea should be restricted to the reach of cannon shot from shore, and it appears that, from that time up to the time of the cession of Alaska to the United States, Russia never asserted in fact or exercised any exclusive jurisdiction in Behring Sea, or any exclusive rights in the seal fisheries therein beyond the ordinary limit of territorial waters.

As to the second of the said five points, we, the said Baron de Courcel, Mr. Justice Harlan, Lord Hannen, Sir John S. D. Thompson, Marquis Visconti Venosta, and Mr. Gregers Gram, being a majority of the said Arbitrators, do decide and determine that Great Britain did not recognize or concede any claim, upon the part of Russia to exclusive jurisdiction as to the seal-fisheries in Behring Sea, outside of ordinary territorial waters.

As to the third of the said five points, as to so much thereof as requires us to decide whether the body of water now known as the Behring Sea was included in the phrase "Pacific Ocean," as used in the Treaty of 1825 between Great Britain and Russia, we, the said Arbitrators, do unanimously decide and determine, that the body of water now known as the Behring Sea, was included in the phrase "Pacific Ocean" as used in the said Treaty.

And as to so much of the said third point as requires us to decide what rights, if any, in the Behring Sea were held and exclusively exercised by Russia after the said Treaty of 1825, we, the said Baron de Courcel, Mr. Justice Harlan, Lord Hannen, Sir John S. D. Thompson, Marquis Visconti Venosta, and Mr. Gregers Gram, being a majority of the said Arbitrators, do decide and determine that no exclusive rights of jurisdiction in Behring Sea and no exclusive rights as to the seal fisheries therein, were held or exercised by Russia outside of ordinary territorial waters after the Treaty of 1825.

As to the fourth of the said five points, we, the said Arbitrators, do unanimously decide and determine that all the rights of Russia as to jurisdiction and as to the seal fisheries in Behring Sea, east of the water boundary, in the Treaty between the United States and Russia of the 30th March, 1867, did pass unimpaired to the United States under the said Treaty.

As to the fifth of the said five points, we, the said Baron de Courcel, Lord Hannen, Sir John S. D. Thompson, Marquis Visconti Venosta, and Mr. Gregers Gram, being a majority of the said Arbitrators, do decide and determine that the United States has not any right of protection or property in the fur-seals frequenting the islands of the United States in Behring Sea, when such seals are found outside the ordinary 3-mile limit.

And whereas the aforesaid determination of the foregoing questions as to the exclusive jurisdiction of the United States mentioned in Article VI. leaves the subject in such a position that the concurrence of Great Britain is necessary to the establishment of Regulations for the proper protection and preservation of the fur-seal in or habitually resorting to the Behring Sea, the Tribunal having decided by a majority as to each Article of the following Regulations, we, the said Baron de Courcel, Lord Hannen, Marquis Visconti Venosta, and Mr. Gregers Gram, assenting to the whole of the nine Articles of the following Regulations, and being a majority of the said Arbitrators, do decide and determine in the mode provided by the Treaty, that the following concurrent Regulations outside the jurisdictional limits of the respective Governments are necessary. and that they should extend over the waters hereinafter mentioned, that is to say:—

Article 1. The Governments of the United States and of Great Britain shall forbid their citizens and subjects respectively, to kill, capture, or pursue at any time and in any manner whatever, the animals commonly called fur-seals, within a zone of 60 miles around the Pribiloff Islands, inclusive of the territorial waters.

The miles mentioned in the preceding paragraph are geographical miles, of 60 to a degree of latitude.

Article 2. The two Governments shall forbid their citizens and subjects respectively to kill, capture, or pursue, in any manner whatever, during the season extending, each year, from the 1st May to the 31st July, both inclusive, the fur-seals on the high sea, in the part of the Pacific Ocean, inclusive of the Behring Sea, which is situated to the north of the 35th degree of north latitude, and eastward of the 180th degree of longitude from Greenwich till it strikes the water boundary described in Article I. of the Treaty of 1867 between the United States and Russia, and following that line up to Behring Straits.

Article 3. During the period of time and in the waters in which the fur-seal fishing is allowed, only sailing-vessels shall be permitted to carry on or take part in fur-seal fishing operations. They will, however, be at liberty to avail themselves of the use of such canoes or undecked boats, propelled by paddles, oars, or sails, as are in common use as fishing boats.

Article 4. Each sailing vessel authorized to fish for fur-seals must be provided with a special license issued for that purpose by its Government, and shall be required to carry a distinguishing flag to be prescribed by its Government.

Article 5. The masters of the vessels engaged in fur-seal fishing shall enter accurately in the official log-book the date and place of each fur-seal fishing operation, and also the number and sex of the seals captured upon each day. These entries shall be communicated by each of the two Governments to the other at the end of each fishing season.

Article 6. The use of nets, firearms, and explosives shall be forbidden in the fur-seal fishing. This restriction shall not apply to shot-guns when such fishing takes place outside of Behring's Sea during the season when it may be lawfully carried on.

Article 7. The two Governments shall take measures to control the fitness of the men authorized to engage in fur-seal fishing. These men shall have been proved fit to handle with sufficient skill the weapons by means of which this fishing may be carried on.

Article 8. The Regulations contained in the preceding Articles shall not apply to Indians dwelling on the coasts of the territory of the United States or of Great Britain, and carrying on fur-seal fishing in canoes or undecked boats not transported by or used in connection with other vessels and propelled wholly by paddles, oars, or sails, and manned by not more than five persons each in the way hitherto practised by the Indians, provided such Indians are not in the employment of other persons, and provided that, when so hunting in canoes or undecked boats, they shall not hunt fur-seals outside of territorial waters under contract for the delivery of the skins to any person.

This exemption shall not be construed to affect the municipal law of either country, nor shall it extend to the waters of Behring Sea, or the waters of the Aleutian Passes.

Nothing herein contained is intended to interfere with the employment of Indians as hunters or otherwise in connection with fur-sealing vessels as heretofore.

Article 9. The concurrent Regulations hereby determined with a view to the protection and preservation of the fur-seals, shall remain in force until they have been, in whole or in part, abolished or modified by common agreement between the Governments of the United States and of Great Britain.

The said concurrent Regulations shall be submitted every five years to a new examination, so as to enable both interested Governments to consider whether, in the light of past experience, there is occasion for any modification thereof.

And whereas the Government of Her Britannic Majesty did submit to the Tribunal of Arbitration by Article VIII. of the said Treaty certain questions of fact involved in the claims referred to in the said Article VIII., and did also submit to us, the said Tribunal, a statement of the said facts, as follows, that is to say:—

“ Findings of fact proposed by the Agent of Great Britain and agreed to as proved by the Agent for the United States, and submitted to the Tribunal of Arbitration for its consideration.

“ 1. That the several searches and seizures, whether of ships or goods, and the several arrests of masters and crews, respectively mentioned in the Schedule to the British Case, pp. 1 to 60 inclusive, were made by the authority of the United States' Government. The questions as to the value of the said vessels or their contents, or either of them, and the question as to whether the vessels mentioned in the Schedule to the British Case, or any of them, were wholly or in part the actual property of citizens of the United States, have been withdrawn from, and have not been consi-

dered by the Tribunal, it being understood that it is open to the United States to raise these questions, or any of them, if they think fit, in any future negotiations as to the liability of the United States' Government to pay the amounts mentioned in the Schedule to the British Case.

"2. That the seizures aforesaid, with the exception of the 'Pathfinder,' seized at Neah Bay, were made in Behring Sea at the distances from shore mentioned in the Schedule annexed hereto marked (C).

"3. That the said several searches and seizures of vessels were made by public armed vessels of the United States, the commanders of which had, at the several times when they were made, from the Executive Department of the Government of the United States, instructions, a copy of one of which is annexed hereto marked (A), and that the others were, in all substantial respects, the same. That in all the instances in which proceedings were had in the District Courts of the United States resulting in condemnation, such proceedings were begun by the filing of libels, a copy of one of which is annexed hereto, marked (B), and that the libels in the other proceedings were in all substantial respects the same; that the alleged acts or offences for which said several searches and seizures were made were in each case done or committed in Behring Sea at the distances from shore aforesaid; and that in each case in which sentence of condemnation was passed, except in those cases when the vessels were released after condemnation, the seizure was adopted by the Government of the United States: and in those cases in which the vessels were released the seizures was made by the authority of the United States; that the said fines and imprisonments were for alleged breaches of the municipal laws of the United States, which alleged breaches were wholly committed in Behring Sea, at the distances from the shore aforesaid;

"4. That the several orders mentioned in the Schedule annexed hereto, and marked (C), warning vessels to leave or not to enter Behring Sea were made by public armed vessels of the United States, the commanders of which had, at the several times when they were given, like instructions as mentioned in finding 3, and that the vessels so warned were engaged in sealing or prosecuting voyages for that purpose, and that such action was adopted by the Government of the United States;

"5. That the District Courts of the United States in which any proceedings were had or taken for the purpose of condemning any vessel seized as mentioned in the Schedule to the Case of Great Britain, pp. 1 to 60, inclusive, had all the jurisdiction and powers of Courts of Admiralty, including the prize jurisdiction, but that in each case the sentence pronounced by the Court was based upon the grounds set forth in the libel.

"ANNEX (A).

"*Treasury Department, Office of the Secretary, Washington,*

"*April 21, 1886.*

"SIR,

"Referring to Department letter of this date, directing you to proceed with the revenue steamer 'Bear,' under your command, to the Seal Islands, &c., you are hereby clothed with full power to enforce the Law contained in the provisions of section 1956 of the United States Revised Statutes, and directed to seize all vessels and arrest and deliver to the proper authorities any or all persons whom you may detect violating the law referred to after due notice shall have been given.

"You will also seize any liquors or firearms attempted to be introduced into the country without proper permit, under the provisions of section 1955 of the Revised Statutes, and the Proclamation of the President dated the 4th February, 1870.

"Respectfully yours,
(Signed) "C. S. FAIRCHILD,

"*Acting Secretary.*

"Captain M. A. HEALY,

"Commanding revenue-steamer 'Bear,'

"San Francisco, California."

"ANNEX (B).

"In the District Court of the United States for the District of Alaska.

"August Special Term, 1886.

"To the Honourable Lafayette Dawson, Judge of said District Court.

"The libel of information of M. D. Ball, Attorney for the United States for the District of Alaska, who prosecutes on behalf of said United States, and being present here in Court in his proper person, in the name and on behalf of the said United States, against the schooner 'Thornton,' her tackle, apparel, boats, cargo and furniture, and against all persons intervening for their interest therein, in a cause of forfeiture, alleges and informs as follows:—

"That Charles A. Abbey, an officer in the Revenue Marine Service of the United States, and on special duty in the waters of the district of Alaska, heretofore, to wit, on the first day of August, 1886, within the limits of Alaska Territory, and in the waters thereof, and within the civil and judicial district of Alaska, to wit, within the waters of that portion of Behring Sea belonging to the said district, on waters navigable from the sea by vessels of 10 or more tons burden, seized the ship or vessel commonly called 'a schooner, the 'Thornton,' her tackle, apparel, boats, cargo, and furniture, being the property of some person or persons to the said Attorney unknown, as forfeited to the United States, for the following causes:

"That the said vessel or schooner was found engaged in killing fur-seal within the limits of Alaska Territory, and in the waters thereof, in violation of section 1956 of the Revised Statutes of the United States.

"And the said Attorney saith that all and singular the premises are and were true, and within the Admiralty and Maritime jurisdiction of this Court, and that by reason thereof, and by force of the Statutes of the United States in such cases made and provided, the afore-mentioned and described schooner or vessel, being a vessel of over 20 tons burden, her tackle, apparel, boats, cargo, and furniture, became and are forfeited to the use of the said United States, and that said schooner is now within the district aforesaid.

"Wherefore the said Attorney prays the usual process and monition of this honourable Court issue in this behalf, and that all persons interested in the before-mentioned and described schooner or vessel may be cited in general and special to answer the premises, and all due proceedings being had, that the said schooner or vessel, her tackle, apparel, boats, cargo, and furniture, may, for the cause aforesaid, and others appearing, to be condemned by the definite sentence and decree of this honourable Court, as forfeited to the use of the said United States, according to the form of the Statute of the said United States in such cases made and provided.

(Signed.) "M. D. BALL,

"United States' District Attorney for the District of Alaska.

"ANNEX (C).

"The following table shows the names of the British sealing-vessels seized or warned by United States revenue-cruisers, 1886-1890, and the approximate distance from land when seized. The distances assigned in the cases of the 'Carolena,' 'Thornton,' and 'Onward,' are on the authority of United States' Naval Commander Abbey (see 50th Congress, 2nd Session, Senate Executive Documents No. 106, pp. 20, 30, 40). The distances assigned in the cases of the 'Anna Beck,' 'W. P. Sayward,' 'Dolphin,' and 'Grace,' are on the authority of Captain Shepard, United States' Royal Marine (Blue Book, United States, No. 2, 1890, pp. 80-82. See Appendix, vol. iii.)"

Name of Vessel.	Date of Seizure.	Approximate Distance from Land when seized.	United States Vessel making Seizures.
Carolena.....	August 1, 1886....	75 miles	Corwin.
Thornton.....	do 1, 1886....	70 do	do
Onward.....	do 2, 1886....	115 do	do
Favourite.....	do 2, 1886....	Warned by "Corwin" in about same position as "Onward."	
Anna Beck.....	July 2, 1887....	66 miles	Rush.
W. P. Sayward.....	do 9, 1887....	59 do	do
Dolphin.....	do 12, 1887....	40 do	do
Grace.....	do 17, 1887....	96 do	do
Alfred Adams.....	August 10, 1887....	62 do	do
Ada.....	do 25, 1887....	15 do	Bear.
Triumph.....	do 4, 1887....	Warned by "Rush" not to enter Behring Sea.	
Juanita.....	July 31, 1889....	66 miles	Rush.
Pathfinder.....	do 29, 1889....	50 do	do
Triumph.....	do 11, 1889....	Ordered out of Behring Sea by "Rush" (?). As to position when warned.	
Black Diamond.....	do 11, 1889....	35 miles	do
Lily.....	August 6, 1889....	66 do	do
Ariel.....	July 30, 1889....	Ordered out of Behring Sea by "Rush."	
Kate.....	August 13, 1889....	do	
Minnie.....	July 15, 1889....	65 miles	do
Pathfinder.....	March 27, 1890....	Seized in Neah Bay.*.....	Corwin.

* Neah Bay is in the state of Washington, and the "Pathfinder" was seized there on charges made against her in Behring Sea in the previous year. She was released two days later.

And whereas the Government of Her Britannic Majesty did ask the said Arbitrators to find the said facts as set forth in the said statement, and whereas the agent and counsel for the United States' Government thereupon in our presence informed us that the said statement of facts was sustained by the evidence, and that they had agreed with the agent and counsel for Her Britannic Majesty that we, the Arbitrators, if we should think fit so to do might find the said statement of facts to be true.

Now, we, the said Arbitrators, do unanimously find the facts as set forth in the said statement to be true.

And whereas each and every question which has been considered by the Tribunal has been determined by a majority of all the Arbitrators;

Now, we, Baron de Courcel, Lord Hannen, Mr. Justice Harlan, Sir John S. D. Thompson, Senator Morgan, the Marquis Visconti Venosta, and Mr. Gregers Gram, the respective minorities not withdrawing their votes, do declare this to be the final decision and award in writing of this Tribunal in accordance with the Treaty.

Made in duplicate at Paris, and signed by us the 15th day of August, in the year 1893.

And we do certify this English version thereof to be true and accurate.

(Signed.) ALPH. DE COURCEL.
JOHN M. HARLAN.
JOHN T. MORGAN.
HANNEN.
JNO. S. D. THOMPSON.
VISCONTI VENOSTA.
G. GRAM.

Declarations made by the Tribunal of Arbitration and referred to the Governments of the United States and Great Britain for their consideration.

1. The Arbitrators declare that the concurrent Regulations, as determined upon by the Tribunal of Arbitration, by virtue of Article VII. of the Treaty of the 29th February, 1892, being applicable to the high sea only, should, in their opinion,

be supplemented by other Regulations applicable within the limits of the sovereignty of each of the two Powers interested and to be settled by their common agreement.

2. In view of the critical condition to which it appears certain that the race of fur-seals is now reduced in consequence of circumstances not fully known, the Arbitrators think fit to recommend both Governments to come to an understanding in order to prohibit any killing of fur-seals, either on land or at sea, for a period of two or three years, or at least one year, subject to such exceptions as the two Governments might think proper to admit of.

Such a measure might be resorted to at occasional intervals if found beneficial.

3. The Arbitrators declare moreover that, in their opinion, the carrying out of the Regulations determined upon by the Tribunal of Arbitration should be assured by a system of stipulations and measures to be enacted by the two Powers; and that the Tribunal must, in consequence, leave it to the two Powers to decide upon the means for giving effect to the Regulations determined upon by it.

We do certify this English version to be true and accurate and have signed the same at Paris, this 15th day of August, 1893.

(Signed)

ALPH. DE COURCEL.

JOHN M. HARLAN.

JOHN T. MORGAN.

I approve Declarations 1 and 3.

HANNEN.

I approve Declarations 1 and 3.

JNO. S. D. THOMPSON.

VISCONTI VENOSTA.

G. GRAM.

REGULATIONS BASED ON AWARD OF ARBITRATORS.

The regulations which must necessarily be framed under the finding of the Arbitrators to apply wholly to waters beyond territorial jurisdiction, it was suggested should be supplemented by others applicable to the territorial waters, and to the territory of the respective nations.

Such regulations must be essentially of an Imperial character, so far as Canada is concerned, and it is at present impossible to give any more definite information touching their nature and extent, than is afforded by the wording of the award as quoted above.

It is, however, regarded as important, both by the British and United States' Governments that some conclusions in this respect should be arrived at without any undue delay, and this phase of the question is at present engaging the attention of the Governments of the respective nations.

REVIEW OF AWARD OF ARBITRATORS.

So much difference of opinion has been expressed as to the result of the arbitration, and as to the effect of the award, and victory having been claimed for both sides, it may be worth while to inquire what has really been the result of the controversy.

The question of success or failure in a litigation, must obviously be decided by a consideration of the issues joined and the contentions on either side. It is proposed, therefore, to point out, as shortly as may be, what was asserted and claimed by the United States and Great Britain, and how their respective claims were disposed of by the tribunal, as appears by the documents to be referred to.

The controversy was clearly divided into two branches. The legal rights asserted by the United States under which they attempted to justify their action, and the regulations which it might be reasonable to prescribe for the preservation of the seals. These were separately argued, and it will be convenient, therefore, to deal with them separately here.

First, then, as to legal rights. The United States brought on the dispute in 1886, by the very strong measure of seizing and confiscating the ships of a friendly power, and imprisoning its subjects, on the ground that they were engaged in an illegal pursuit, in violation of international law. It must be assumed that this was done only after a careful consideration of their legal position and rights.

When the vessels were libelled in the American Courts, the right to take this course was rested distinctly by the Counsel for the United States, on the sole ground that the Behring Sea was an inland water and *mare clausum*, over which they had jurisdiction and dominion, as asserted in the Statute of the United States, on which the information was based. Upon this ground as the defence, filed in 1887, declares: "The United States are prepared to abide the judgments of the Courts and the opinion of the civilized world." They did venture to rely upon it in the local Court of Alaska, which decided in their favour and justified the seizure, but when it came before the "civilized world," first in the form of diplomatic correspondence with England, and then before the international tribunal in Paris, a different ground was taken.

The late Mr. Blaine, when Secretary of State, denied that the United States had ever asserted the doctrine of *mare clausum*. He stated "The repeated assertions that the Government of the United States demands that the Behring Sea be pronounced *mare clausum* are without foundation. The Government has never claimed it and never desired it. It expressly disavows it." And subsequently alluding to an expression by Lord Salisbury which seemed to him to imply that the United States had hitherto been resting its contention upon the fact that Behring Sea was a *mare clausum*, he observed "if that was his intention, it would have been well for his Lordship to specify wherein the United States ever made the assertion."

Mr. Carter in his argument before the tribunal denied the responsibility of the United States for the ground taken in the Alaska Court, saying that the position of the Government must be sought and found in their responsible utterances made to Great Britain in diplomatic form.

The Attorney General, as reported by the correspondent of the London *Times*, observed with much force that the proposition was somewhat startling that a defendant should be libelled for one offence and afterwards told that he had committed another offence of which he was never informed, and which he was never called upon to answer. And that the proposition was still more startling, that a Government should appeal to its judge to put a Municipal Statute in force on certain definite grounds, and should then proceed to justify the condemnation on grounds which neither the judge nor they had ever dreamed of.

The United States having acted upon their own view of international law, when their conduct was questioned, claimed that they should be allowed to formulate the legal propositions or questions upon which they relied. They availed themselves of this privilege, and there can be no complaint therefore that their exact contentions were not fairly and fully represented by the words of the reference.

Lord Salisbury had expressed the readiness of the British Government to refer to arbitration "the legality of the recent captures with the issues that depend upon it," but Mr. Blaine objecting to this, said: "It will mean something tangible in the President's opinion, if Great Britain will consent to arbitrate the real questions which have been under discussion between the two governments for the last four years. I shall endeavour to state what in the judgment of the President these issues are.

(App. Vol.
III, p. 114-115-
120.)

(Vol. III, U.
S., No. 1,
(1891), p. 56.)

(Vol. III, U.
S., No. 2,
(1891), p. 1.)

(Revised Re-
port, p. 142-4.)

(Reprint of
letters to the
Times.)

(Vol. III, p.
520.)

(Vol. III, U.
S., No. 1,
(1891), p. 55.)

"1. What exclusive jurisdiction in the sea now known as the Behring's Sea, and what exclusive rights in the seal fisheries therein, did Russia assert and exercise prior and up to the time of the cession of Alaska to the United States?

"2. How far were these claims of jurisdiction as to the seal fisheries recognized and conceded by Great Britain?

"3. Was the body of water now known as the Behring's Sea included in the phrase "Pacific Ocean" as used in the Treaty of 1825 between Great Britain and Russia: and what rights, if any, were given or conceded to Great Britain by the said Treaty?

"4. Did not all the rights of Russia as to jurisdiction and as to the seal fisheries in Behring Sea east of the water boundary, in the Treaty between the United States and Russia of the 30th March, 1867, pass unimpaired to the United States under that Treaty?

"5. What are now the rights of the United States as to the fur seal fisheries in the waters of the Behring's Sea outside of the ordinary territorial limits, whether such rights grew out of the cession by Russia of any special rights or jurisdiction held by her in such fisheries, or in the waters of Behring's Sea, or out of the ownership of the breeding islands and the habits of the seals in resorting thither and rearing their young thereon and going out from the islands for food, or out of any other fact or incident connected with the relation of these seal fisheries to the territorial possessions of the United States."

Of these questions Lord Salisbury accepted Nos. 1, 2 and 4 as proposed, observing that the fourth was hardly worth referring, as Great Britain, would be prepared to accept it without dispute. In the others no substantial alteration was made, as will appear from the following statement; and in order to show at the same time how each question was disposed of, it will be convenient to place the questions submitted, with the answers given by the award, in parallel columns.

(Vol. III, U. S., No. 1, (1891), p. 87.)

Questions Submitted.

Award Thereon.

1. What exclusive jurisdiction in the sea now known as the Behring's Sea, and what exclusive rights in the seal fisheries therein did Russia assert and exercise prior and up to the time of the cession of Alaska to the United States?

1. That in the course of the negotiations which led to the conclusion of the Treaties of 1824 with the United States, and of 1825 with Great Britain, Russia admitted that her jurisdiction in the said sea should be restricted to the reach of cannon shot from shore, and it appears that from that time up to the cession of Alaska to the United States, Russia never asserted in fact or exercised any exclusive jurisdiction in Behring Sea, or any exclusive rights in the seal fisheries therein beyond the ordinary limit of territorial waters.

2. How far were these claims of jurisdiction as to the seal fisheries recognized and conceded by Great Britain?

2. That Great Britain did not recognize or concede any claim, upon the part of Russia, to exclusive jurisdiction as to the seal fisheries in Behring Sea, outside of ordinary territorial waters.

3. Was the body of water now known as the Behring Sea included in the phrase "Pacific Ocean" as used in the Treaty of 1825 between Great Britain and Russia;

3. As to the third of the said five points, as to so much thereof as requires us to decide whether the body of water now known as the Behring Sea was included

Questions Submitted.

Award Thereon.

and what rights, if any, in the Behring Sea were held and exclusively exercised by Russia after said Treaty?

in the phrase "Pacific Ocean" as used in the Treaty of 1825 between Great Britain and Russia, we the said Arbitrators do unanimously decide and determine that the body of water now known as the Behring Sea was included in the phrase "Pacific Ocean" as used in the said Treaty. And as to so much of the said third point as requires us to decide what rights, if any, in the Behring Sea, were held and exclusively exercised by Russia after the said Treaty of 1825, we the said Baron de Courcel, Mr. Justice Harlan, Lord Hannen, Sir John Thompson, Marquis Visconti Venosta, and Mr. Gregers Gram, being a majority of the said arbitrators, do decide and determine that no exclusive rights of jurisdiction in Behring Sea, and no exclusive rights as to the seal fisheries therein were held or exercised by Russia outside of ordinary territorial waters after the Treaty of 1825.

4. Did not all the rights of Russia as to jurisdiction and as to the seal fisheries in the Behring Sea, east of the water boundary, in the Treaty between the United States and Russia of the 30th March, 1867, pass unimpaired to the United States under that Treaty?

4. That all the rights of Russia as to jurisdiction and as to the seal fisheries in Behring Sea, east of the water boundary, in the Treaty between the United States and Russia of the 30th March, 1867, did pass unimpaired to the United States under the said Treaty.

5. Has the United States any right, and if so, what right of protection or property in the fur seals frequenting the islands of the United States in Behring Sea, when such seals are found outside the ordinary three mile limit?

5. That the United States has not any right of protection or property in the fur seals frequenting the islands of the United States in Behring Sea, when such seals are found outside the ordinary three mile limit.

In this last answer, neither Mr. Justice Harlan nor Senator Morgan concurred, but it is difficult to judge what exact right of protection or property they conceive to belong to the United States.

(Vol. III, U. S., No. 1, (1891), p. 37.)

As to the third question, Mr. Blaine said: "Legal and diplomatic questions, apparently complicated, are often found, after prolonged discussion, to depend on the settlement of a single point. Such, in the judgment of the President, is the position in which the United States and Great Britain find themselves in the pending controversy touching the true construction of the Russo-American and Anglo-Russian Treaties of 1824 and 1825. Great Britain contends that the phrase 'Pacific Ocean' as used in the treaties was intended to include, and does include, the body of water which is now known as the Behring Sea. The United States contends that the Behring Sea was not mentioned or even referred to in either treaty, and was in no sense included in the phrase 'Pacific Ocean'. If Great Britain can maintain her position that the Behring Sea at the time of the treaties with Russia of 1824 and 1825, was included in the Pacific Ocean, the Government of the United States has no well grounded complaint against her. If, on the other hand, this Government can prove beyond all doubt that the Behring Sea, at the date of

the treaties, was understood by the three signatory powers to be a separate body of water, and was not included in the phrase 'Pacific Ocean,' then the American case against Great Britain is complete and undeniable." And after devoting many pages of argument to show that it was not so included, Mr. Blaine said "It must certainly now be apparent to Lord Salisbury that Russia never intended to include the Behring Sea in the phrase 'Pacific Ocean.' " (Vol. III, U. S., No. 1, (1891), p. 50.)

On this point, so strongly and emphatically put forward and relied upon, it will be observed that the decision of the tribunal was unanimous.

It is clear that the vessels of Great Britain were seized and condemned upon a ground afterwards disclaimed by the United States Government, and which they did not attempt to support before the Tribunal. Upon each and every of the substituted legal grounds upon which, after mature consideration, they endeavoured to justify their right, they were found to be wrong. Twelve days were occupied by the Counsel of the United States in attempting to support the rights so alleged and exercised, and as regards the legality of the rights asserted by them it would be impossible to conceive a more complete and conclusive defeat.

It has been said that the United States Government had prevailed as regards the question of regulations, and that while Great Britain gained the judgment, the United States Government got the seals. On this point the result is not susceptible of so precise a test as were the legal questions raised, which admitted of decision by an affirmative or negative. Both sides conceding the necessity for regulations, the nature of these was left wholly to the discretion of the Arbitrators.

Had the United States Government succeeded in the contention, that they owned the seals and had a right to protect them wherever found, there would have been no necessity for concurrent regulations. Great Britain, however, had all along admitted that pelagic sealing should be regulated, and expressed her readiness to assist in reasonable and provident measures. When this branch of the question came up for discussion her Counsel submitted a code of regulations deemed to be effective. They invited the other side to point out their inefficiency and suggest changes. There regulations comprised a close season in Behring Sea from the 15th September to the 1st of July, and a protective zone of twenty miles around the Pribyloff Islands. They contended also that according to the proper construction of the treaty any regulations prescribed should be confined to Behring Sea.

The United States Government declined to discuss these proposals, or to suggest any other proposition short of expulsion from Behring Sea, which was subsequently extended in effect to the absolute prohibition of pelagic sealing. This measure they advocated, alleging that they had proved it to be essential. (Carter's argument, Revised report, p. 370.) (See Letters to "Times," p. 58.)

The arbitrators did not abolish pelagic sealing, but fixed a close season from the first of May to the thirty first of July, instead of from the fifteenth September to the first of July, extending from north latitude 35, and east of the 180th degree of longitude, and a zone of 60 miles instead of thirty. They also decided that fire arms or explosives should not be used in Behring Sea.

In view of the respective contentions it cannot be said that the United States have been successful. It may have been more than they expected, as has frequently been said, but it certainly is not what they contended for as essential.

Behring Sea is twelve hundred miles in extent from east to west, and more than eight hundred from north to south. Its area is stated in the United States case to be 873,128 square miles. Speaking roughly the protective zone would include about 15,000 square miles. Of the 14 vessels seized twelve were taken outside of this limit. At the outset

seals were hunted by the Indians with spears. Rifles then came into use, shot guns being afterwards commonly substituted. The Indians, finding that the use of fire arms had rendered the seals too wild, for spearing, generally discarded the spear for the gun. This method was objected to before the Tribunal on the ground that a large proportion of animals wounded were lost, an argument which no doubt prevailed with the arbitrators.

Time and experience alone can decide absolutely how far pelagic sealing may be carried on profitably under the new regulations. This is a matter of opinion on which it would be useless to dogmatize when those most competent to judge so widely differ.

It is certain the arbitrators did not intend to put an end to the pursuit, and have not framed their regulations with that end in view, although the United States' Government insisted upon the necessity.

There is one aspect of the case which effectually nullifies the claim of victory on the part of the United States.

(Carter's argument, Revised Report, p. 353-360.) When regulations were first suggested, Great Britain proposed that their observance should not become obligatory on the United States and Great Britain until all other maritime powers should have accepted them.

(Vol. III, U. S., No. 3, (1892). p. 117.) Lord Salisbury in his telegraphic communication of November 22nd 1891, pointed out that "Great Britain and the United States would otherwise simply hand over to the nationals of other countries the right of exterminating the seals."

(Page 130.) Mr. Blaine's despatch of the 20th December, objected to this, saying that during the five years the dispute had been in progress, no European nation had engaged in sealing; one German vessel had once appeared, but had never returned. The President, he said, in a previous letter of the 27th November, regarded this as a material change in the terms of the arbitration agreed on, and did not feel willing to take it into consideration. Lord Salisbury did not press this point.

(Page 126.) Before the award of the arbitrators, foreign nations had little inducement to engage in the industry. They had to compete on equal terms with the Canadians already engaged therein, in comparative proximity to the field of operations, and further, they had to face the almost certainty that their vessels would be seized by the United States under claims of right, which whether well or ill founded would have to be contested and settled with that nation either by arbitration or war.

By the award these claims are authoritatively denied and it is decided that the United States Government have no legal right to interfere with pelagic sealing outside their territorial waters.

This award, while restricting British and United States sealers to certain areas and seasons, seemingly invites other nationals to compete at an advantage with their former competitors, proclaiming to them that at all times and everywhere (without further legislation and agreement) they may pursue seals without let or hindrance outside the three-mile limit.

Pelagic sealing, before these regulations, was known to have been profitable, and it is said by the United States to have been destructive to the industry on the islands. If the effect of those regulations is to prohibit only those subject to them from continuing it with advantage, it is questionable how long those not so restricted will abstain.

This view is obvious. Either these regulations are reasonable or they are not. They were intended to afford a fair share of the sealing industry to the possessors of the Pribylov Islands, and to others who pursue the seals at sea. If reasonable and efficient, other nations will agree to them equally with Great Britain and the United States.

Then Great Britain will have secured all she has ever contended for, that the Regulations to be established should have just and equitable regard to all interests affected. If they are not reasonable and efficient, and other nations will not accede to them, what is denied to British subjects and American citizens will probably be enjoyed by others.

The destruction of the seal species cannot be in the interests of any country; and the ultimate result will probably be a renewal of diplomatic action, resulting in a convention by all the nations interested. Thus a better system than it was in the power of the Tribunal to establish will be agreed upon both on land and at sea, and such amendments from time to time adopted, as a better knowledge of the habits and life history of the animal, which is yet very imperfect, will show to be necessary.

With this, and the effectual resistance and refutation of the illegal conduct and unfounded legal claims of the United States, Great Britain may well be content, for it will be all that she has ever claimed or desired.

As the matter now stands it cannot be said that the result has been a success for the United States. Their contention was that the capture of Pribyloff Island seals was illegal, and if not forbidden by law should be wholly prohibited by regulations. It has been decided to be legal, and should the regulations be found to prevent pelagic sealing by British subjects and American citizens, they will do so only indirectly and unintentionally, and will probably hand over the industry to others not affected by them. This would mean the end of the present code of Regulations.

It will be interesting to await the action of the United States Government, towards their own citizens with regard to pelagic sealing in Behring Sea.

The act under which British ships were seized (chapter 1956 Revised Statutes), according to the past contentions of the United States' Government was to prevent the killing of fur bearing animals in the territory of Alaska including Behring Sea. It was rigorously enforced against United States citizens.

It was, of course, competent for them to apply this act to their own citizens but its extended application to the nationals of other countries was disputed.

So long as the act remains in force, it is just as applicable to the citizens of the United States as ever it was. It no longer can be applied to the nationals of Foreign Powers.

PELAGIC FUR-SEALING.

Under the heading "Seizure of and interference with British sealing vessels in the North Pacific Ocean," as well as under the heading the "Behring Sea Question," the report for 1892 dealt quite fully with pelagic sealing industry.

The closure of the Behring Sea against the Canadian sealing fleet, under special agreement between Her Majesty's Government and that of the United States, pending the result of arbitration, had the natural effect of forcing it to seek some new grounds, in order to prevent the precarious ventures from ending in failure and consequent financial disaster to the owners of the vessels.

They, therefore, sought the Asiatic side of the Pacific, and carried on their operations in the vicinity, but outside of territorial limits, of the Russian seal islands known as Commander Islands with more or less success. Here they encountered much the same treatment as had previously been dealt out to them by the authorities of the United States, and a number of their vessels were seized, at distances far beyond the territorial waters of Russia.

The matter formed the subject of diplomatic correspondence and was left at this point in the report of last year.

Since then, claims to compensation for loss and damages have been forwarded on behalf of the parties aggrieved, and the diplomatic correspondence has continued.

RUSSIAN COMMISSION ON SEIZURES.

The Russian Government by Imperial decree appointed a Commission to enquire into the several cases of the vessels seized during 1892.

The findings of this Commission were as follows—

ON THE ARREST AND CAPTURE OF THE VESSELS.

The examination into the circumstances which had attended the arrest and capture in Behring Sea of Canadian schooners and sealing-boats by Russian cruisers, was intrusted to a Special Commission appointed by Imperial decree.

To this Commission the following documents were communicated, which served as a basis for elucidating the question at issue:—

Log-books, notes and maps found in the captured vessels;

Protocols of seizure;

Report on the course of the cruiser "Zabiaka," together with the report drawn up by the Officer Commanding the Pacific Squadron;

Affidavits communicated by the British Government containing the depositions of the captains and crews of the captured vessels.

At the same time the Commission summoned Captain de Livron, late officer in command of the "Zabiaka," and the "Conseiller de Collège" Grebnitsky, District Governor of the Commander Islands, in order to hear their verbal depositions.

The examination establishes with the greatest certainty the following facts:—

1. The schooner "Marie" was captured on the 9th (21st) August, 1892, by M. Grebnitsky, District Governor of the Commander Islands, being on board the steamer "Kotik." The capture was made in latitude $54^{\circ} 36'$ north, and longitude $168^{\circ} 24'$ east, at a distance of 7 miles from Copper Island. Two boats belonging to this vessel had been sighted and captured $1\frac{1}{2}$ miles from the shore. Seventeen seals were found on board, of which ten had not yet been skinned. Without waiting to pursue the other boats, which were hunting at a somewhat greater distance, M. Grebnitsky seized the schooner himself and brought her to anchor before sunset off the village of Glinka. Next morning search was made both on the schooner and in the boats which had rejoined her during the night, and 622 seal-skins were found, of which 585 were those of females, and consequently had been taken close to the shore. An examination of the log-book of the "Marie" proved that this book had not been posted for four days, and did not contain the necessary information as to the course taken and the stoppages made by the schooner.

The degrees of longitude and latitude were only marked in the almanacs, and even that with great carelessness. The place of destination of the schooner was designated by the vague expression "sealing grounds." The skins, taken from pregnant females, bear witness to the fact that the seals had been killed close to the shore. In fact, during the period of suckling, in July and August, the females cannot go to any distance from the shore. This inference was confirmed by the presence on board the schooner of clubs which are used exclusively in the pursuit of seals on the coast. In his written protest, the captain of the "Marie" declares that his vessel was seized at a distance of $9\frac{1}{2}$ miles from shore. But the chronometer found on board the steamer was in such bad order that its indications were found to occasion an error of 15 miles. According to the captain's own admission, 499 of the seals taken had been captured in the neighbourhood of Copper Island, and only 148 in that of Vancouver. He does not deny that the three boats of the "Marie" were seized within our territorial waters. But at the same time he expresses the opinion that M. Grebnitsky should have confined his action to seizing them, and that he ought not in addition to have seized, as he did, other boats belonging to the schooner "Annie Moore," the latter not having been taken. The schooner "Annie Moore," whose boats were taken, did, in fact, succeed in evading pursuit. But that only shows that the schooners send their boats to a distance to pursue the seals in the rookeries while they

remain themselves outside territorial waters. It was only thus that the "Annie Moore" was able to escape seizure whilst her boats were captured on the coast by the inhabitants of the country. The captain of the "Marie" admitted that the protocol of seizure was correctly drawn up, though he refused to sign it. The Commission, guided by the facts set forth above, concluded that the seizure of the schooner "Marie" had been carried out in a perfectly regular manner. It is undeniable that, juridically, the boats constitute a dependency of the schooner. Their seizure, therefore, in territorial waters legalizes that of the vessel of which they form part. If it were otherwise, the schooner could pursue seals on the coast with impunity by sending her boats there, and thus infringe the inviolability of territorial waters, though herself remaining outside their limits.

2. The schooner "Rosie Olsen" was also seized by E. Grebnitsky, District Governor of the Commander Islands. The seizure, carried out by the "Kotik," took place on the 14th (26th) July, 1892, in latitude $55^{\circ} 23'$ north, and longitude $185^{\circ} 27'$ east. The schooner had been sighted in territorial waters, but having seen the steamer, she had succeeded in gaining the high sea, after having given her boats the signal to rejoin her. Nevertheless the "Kotik," and a boat which she sent out succeeded in seizing four sealing-boats in territorial waters. One of these was seized 1 mile from the coast of Aria Island. Three boats out of seven were able to get back to the schooner. After having seized the four boats, M. Grebnitsky proceeded to capture the schooner, and drew up a protocol. The captain of the "Rosie Olsen," who was in a state of great excitement, refused to sign this document, and on arriving at Petropavlovsk, protested against the seizure of his schooner on the high sea. On board the schooner and the boats were found 379 seal skins, of which 96 per cent had been taken from females; 377 of these skins were on board the schooner. The other two were seized in the boats. The crew was composed of six Europeans and fourteen Indians. It appears from the log that the schooner had been sealing for thirteen days in the neighbourhood of Copper Island by means of her boats, which she sent into territorial waters. On the 12th (24th) July, 101 seals had been killed. The log had not been posted for several days; the chronometer was completely out of order. According to the statement of the captain of the "Rosie Olsen," the schooner was seized 38 miles from shore. To convince oneself of the incorrectness of his deposition one need only observe on the map that the point of intersection of the longitude and latitude indicated by the captain is not 38 but 54 miles from the nearest point of the coast. It may be concluded from this, that these statements were unfounded and made at random after the event.

After examining all the circumstances which accompanied the seizure of the "Rosie Olsen" the Commission concluded that this seizure was regular. The boats of these schooners were in fact surprised in the act of sealing in territorial waters.

The schooner in question is not at present at Petropavlovsk but in Canada. She was employed to repatriate the crews of the captured schooners. She was given a new name, that of "Prize," and is commanded by one of the repatriated captains, named Kopp. Captain de Livron deposed that Mr. Kopp had informed him in a private letter of the arrival of the "Prize" at her destination; the letter added that the sailors threatened to sue Mr. Kopp for payment of their wages during the passage. Captain Kopp having performed the duty with which he was charged by the Russian authorities of repatriating the crews in question, the Commission considers it just to hand over to him the property of the schooner "Prize," on condition that he deduct from her value, which may be estimated at \$600, a sufficient sum to satisfy the above-mentioned claims in so far as they may be found valid.

3. The schooner "Carmolite" was captured on the 17th (29th) August, 1892, by the cruiser "Vitzia," commanded by Captain Zarine, and flying the flag of the Officer Commanding the Pacific Squadron. It appears from the documents examined by the Commission that this schooner was sighted by the cruiser on the other side of the isthmus, which is at the southern point of Copper Island. The "Carmolite" was then about three miles from a seal rookery. She sighted the cruiser, and taking advantage of the fact that the latter, in order to reach her, was obliged to pass round a long reef situated at the south-eastern extremity of the island, she set sail

and gained the open sea. But after an hour and a half the cruiser came up with her at a distance of eight miles from shore, in latitude $54^{\circ} 29'$ north, and longitude $168^{\circ} 2'$ east. The ship's papers showed that the schooner had been since the 29th July in the waters of the Commander Islands. The captain declared that the 608 seals, the skins of which were found on board his vessel, had been taken near Behring and Copper Islands. This is in contradiction to his declaration annexed to the British Ambassador's note of the 9th (21st) December, 1892, according to which the capture of the seals had only taken place at a distance of 60 miles from the islands. The declaration of the captain of the "Carmolite" as to the distance from shore where the seizure took place, which is given as 25 miles, as well as his statement that he had not entered Russian territorial waters, are alike refuted by precise information. In order to show their inaccuracy, it is sufficient to make a calculation based upon the cruiser's rate of speed and on the extent of horizon visible at the moment when the schooner was sighted for the first time by the "Vitiáz." The Carmolite's log-book had not been posted for two days. Two protocols of seizure were drawn up, one in Russian, the other in English. In consequence of this evidence the Commission recognized that the seizure of the "Carmolite" was altogether in conformity with the principles of international law.

4. The schooner "Vancouver Belle" was captured by the cruiser "Zabiaka" on the 31st July, 1892, in $54^{\circ} 17'$ north latitude and $168^{\circ} 12'$ east longitude, 17 miles from Copper Island. The Commander of the "Zabiaka" having been informed by coastguardsmen that this schooner was sealing on the coast, proceeded towards her. On the way, however, he found three boats belonging to the schooner "Sayward," sealing less than 3 miles from the coast. It took about two hours to seize and take in tow these boats, and the "Vancouver Belle" took advantage of this delay to make for the open sea. When this schooner was seized it was found that no entries had been made in her log-book during the preceding twenty-four hours, but the entries found showed that she had on two occasions been engaged in sealing close to the shore in the straits between the islands. The necessary equipment for sealing on the coast was found on board the vessel. Of the 594 skins seized, 88 per cent were those of females with young. It appeared from Captain Kopp's own statements (affidavit, p. 14) that it was 2 o'clock when he caught sight of the cruiser. As it was 4 o'clock when the "Zabiaka" came up with the schooner, the latter could not have proceeded further than 14 miles seawards. In view of all that has been stated above it was decided that the seizure of the "Vancouver Belle" was perfectly regular.

5. The boat belonging to the schooner "Marvin," and the three boats belonging to the schooner "Sayward," mentioned in the British Ambassador's note of the 4th December, 1892, which inclosed the written protests of the masters of those vessels, were seized under the following circumstances. The first mentioned boat was seized by the inhabitants of Copper Island at the rookery itself, as the crew were beginning to slaughter the seals. The three others were seized by the cruiser "Zabiaka." The inhabitants of the islands had informed the cruiser that several foreign boats had landed at the rookery, and after killing a certain number of seals, had put to sea again. The cruiser proceeded in the direction indicated, and, on the 21st July, at a point 9 miles from the south-eastern extremity of Copper Island, came upon three boats which took to flight with all sail set and rowing as fast as they could. Finding that their efforts were useless, the crew stopped rowing and began to throw overboard the seals they had killed. But before they were able to complete this operation, the cruiser seized the three boats, on board of which eight seals were found. The fact that the animals' heads were battered in showed that they had been killed with clubs in the rookery, and not shot at sea. The crew of the boats belonging to the schooner "Sayward" were taken to Petropavlovsk on board the "Zabiaka," and the men belonging to the whale-boat sent from the "Marvin," who had been seized by the people of the village of Glinka, were taken by them to the village, which is situated on the opposite shore of the island. They were taken thence to Petropavlovsk by the steamer "Kotik."

Further, the inhabitants of the village of Préobrajenskoe, which is also on Copper Island, handed over to the cruiser "Zabiaka" six sailors whom they had seized at the rookery. These men stated that they had come to hunt in two boats belonging to the English schooner "Annie Moore." The schooner herself was not seen.

These facts show that there is no foundation for the hypothesis, contained in the British Ambassador's note, that "presumably the distance which divided the 'Sayward' from her boats was not great." As a matter of fact it was impossible to see the schooner from the spot where the boats were seized, even with a glass. The fact is that, according to the depositions of the masters of the "Marvin" and "Sayward," those schooners were 20 miles from Copper Island at the time when their boats were plundering the rookeries on the Russian shore.

6. The English schooner "Tupper" was seized by the cruiser "Zabiaka" on the 29th July (10th August), 47 miles from Behring Island, on suspicion of being one of the vessels the boats of which had been seized in Russian territorial waters. As, however, the suspicion was not confirmed by positive proofs, although 274 seal-skins were found on board the schooner, the cruiser "Zabiaka" confined herself to warning the vessel not be engaged in sealing in the Russian waters around the Commander Islands. This warning was entered in the log-book of the "Tupper," as appears from the deposition of the master of that schooner inclosed in the British Ambassador's note of the 9th December, 1892. As for the assertion of the master of the "Tupper" that the Commander of the "Zabiaka" made use of threats towards him, and forbade him to hunt seals in the open sea, it is not supported by proofs. On the contrary, the seal-skins found on board the schooner were not seized, and the master's statement that the seizure resulted in loss to him is without foundation.

7. The schooner "Hall" was found on the 5th August, 1892, in $54^{\circ} 33'$ north latitude, and $166^{\circ} 10'$ east longitude, engaged in sealing at sea, 17 miles from Behring Island. Although 325 skins were found on board, there was no direct proof that the schooner had been sealing in Russian territorial waters. The Commander of the "Zabiaka" therefore confined himself to warning the ship to continue to abstain from sealing on the Russian shore.

8. The schooner "Willie McGown" was sighted by the cruiser "Zabiaka" on the 6th June, 1892, 15 miles from Copper Island. The schooner was under easy sail, but as soon as she caught sight of the cruiser, she made for the open sea under full canvas. The cruiser came up with her in $54^{\circ} 21'$ north latitude and $167^{\circ} 43'$ east longitude, 21 miles from the coast. It was only after the cruiser had fired two shots that the schooner was brought to. A search brought to light equipment for sealing on the coast, and seventy-six skins, of which 69 were those of females. No entries had been made in the log-book for twenty-four hours. On the whole, the log-book contains very meagre data in regard to the vessel's course. All the entries are vague, *e. g.*, "Jogging around sealing grounds," or simply "Jogging." According to one entry the schooner was in sight of Copper Island on the 1st (13th) July, and the weather was hazy. On the 3rd (15th) she sighted the "Zabiaka." The weather was again hazy, and there was a slight fog. On that day the cruiser "Zabiaka" was close to the shore, just off the rookery, as appears from her log-book. Traces of dots and calculations made in pencil on the chart and partly rubbed out show that the schooner took her bearings by the compass when she was one and a half hours' distance from the rookery.

One is justified in concluding from all these data that the seals found on board the schooner had been killed in Russian territorial waters.

Nevertheless, the commission did not feel justified in declaring that the seizure of the schooner "Willie McGown" was altogether regular.

9. The schooner "Ariel" was seized by the cruiser "Zabiaka" on the 16th July, at 3.30 a.m., in $54^{\circ} 31'$ north latitude and $167^{\circ} 40'$ east longitude. At the time of the seizure she was making away from the coast under easy sail, and was 21 miles from Copper Island. On board of her were found equipment for sealing on the coast and 139 skins, 90 per cent of which were those of suckling females. No entries had

been made in the log-book for two days. The book contains two different entries on the same date. The first states that the schooner was in sight of Copper Island; this implies, in view of the fog which prevailed on that day that the vessel was then in our territorial waters. The traces of dots and of calculations made in pencil on the chart and half rubbed out show that the bearings of the ship were taken by the compass when she was quite close to the shore.

Without denying the importance of these indications, which show that the schooner "Ariel" had been in Russian territorial waters, the majority of the Commission do not consider that her seizure can be justified from a legal point of view on account of the absence of a condition which is essential and generally admitted, that is to say, the "Ariel's" boats had not been seen sealing in our waters.

ON THE COMPLAINTS OF ILL-TREATMENT BY THE CREWS OF THE SEIZED SCHOONER.

The Commission appointed to examine the documents and depositions relating to the seizure by Russian cruisers of Canadian vessels which were fishing for seals in our territorial waters has made a minute investigation of the complaints put forward by the crews of those vessels in regard to their alleged ill-treatment on landing at Petropavlovsk. These complaints, which were set forth in the British Ambassador's note of the 17th (29th) November, 1892, and in the declarations appended to it, were accompanied by a remonstrance against the very severe conditions said to have been arranged in regard to the repatriation of the crews in question between the Captain of the "Zabiaka" and the master of the American ship "Majestic." The Commission had also to report on this claim after having duly considered the circumstances relating to it.

In the first place it appears, for the verbal depositions of Captain de Livron, as well as from the documents which formed part of the official records of the affair, that the measures taken by the Captain of the cruiser "Zabiaka" in regard to the crews of the captured schooners were in no way inconsistent with the principle enunciated in the above-mentioned note from Sir R. Morier. In the opinion of Her Britannic Majesty's Ambassador, the men of the schooners ought to have been set at liberty at the time the ships were seized. That is, in fact, what Captain de Livron did. Having accomplished the capture without meeting with any resistance, and having drawn up a protocol, he lost no time in declaring the freedom of their captains and crews. Immediately afterwards, in accordance with his instructions, he conveyed them to the nearest Russian port. The small town of Petropavlovsk, numbering in all 300 inhabitants, did not afford private buildings of sufficient size to enable them to be lodged there. Consequently, it was proposed to these men, who, be it said once more, were in no way under arrest, and who enjoyed full liberty, that they should occupy the only Government building which was available. Unfortunately, it was not sufficiently spacious. The Captain of the "Zabiaka" only took the more pains to expedite as much as possible the repatriation of the schooners' crews. He applied, for this purpose, to the captain of the American ship "Majestic," and made use of the schooner "Rosie Olsen," which had been declared a lawful seizure, and whose name had been changed to that of "Prize."

The crews of the schooners were distributed in the following manner: The "Majestic" took on board twenty-three men from the "Willie McGowan," twenty-four from the "Ariel," and twenty-two from the "Rosie Olsen"; the "Prize" took six from the boats of the "Annie Moore," nine from the "Sayward," and twenty-two from the "Vancouver Belle." The men of the schooners "Marie" and "Carmolite" were sent separately to Vladivostok in the cruiser "Vitiaz," and from thence to Japan. During their stay on board, and from the first day of their landing, 15 kopecks per man per day were allotted to the crews for their maintenance. This appears in the official correspondence which passed between Captain de Livron and the District Governor. In addition to this, the Captain of the "Zabiaka" placed at their disposal a net and some boats, in order that they might go out fishing, and gave them assistance by seamen from the cruiser.

If the men of the "Rosie Olsen" only received their subsistence allowances from the 3rd August, it was because up till then they were able to live upon their

own provisions, which had been restored to them by the District Governor of the Commander Islands. The complaints made by some of the men that they were obliged to sleep in the open air owing to want of room cannot be taken seriously. As a matter of fact, it was so hot at Petropavlovsk in the months of July and August that the officers and men of the "Zabiaka" slept on deck by preference. With respect to the effects belonging to the crews, which were said to have been taken away, or not to have been all restored to them, the Commission satisfied itself that all the stores, clothing, stockings, boots, &c., which were on board the "Marie" and the "Rosie Olsen" at the time of their capture were handed to the captains of those ships by M. Grebnitsky. Their demand to be compensated for the value of these goods is therefore groundless. As to the other schooners, the Captain of the "Zabiaka," when proceeding to seize them, left to the crews all the effects carried upon their persons and belonging to them. He considered it his duty, on the other hand, to confiscate and hand over to the authorities at Petropavlovsk, from whom he took a full receipt, everything which was the property of the ship-owners, including the stores which were meant to be sold to the crews. The only men who had no change of clothes were those who were in the boats of the "Sayward." On the arrival of the schooner "Ariel" at Petropavlovsk, her captain regained possession of all that belonged to him excepting a sum of 100 dollars. As soon as he had made a statement of his loss to Captain de Livron, he received authority to go on board the schooner, accompanied by an officer, to look for the money, which was found behind the drawer of a chest.

The captain in question then asked to have back the ship's chronometer, which was certainly refused to him. The repatriation of the crews who were sent in the "Majestic" took place in pursuance of an agreement in due form concluded with the captain of that ship. The latter received from Captain de Livron: (1) full rations for forty-five days, calculated according to the actual statements of the captains of the captured schooners, and based upon the Regulations of the American mercantile marine; (2) a number of boats (eight large and two small), indispensable for the safety of eighty-seven men in case of shipwreck; (3) two extra ovens for cooking the food; (4) a sufficient quantity of crockery, as well as a copper boiler supplied by the cruiser. The captain of the "Majestic" bound himself to repatriate the crews on the understanding that he should afterwards appropriate, by way of remuneration, all the articles which have just been enumerated. The crews of the schooners were lodged in the hold above the ballast. The floor was covered with dried branches, fastened together by means of ropes, and on these the men were able to lay down the mattresses which were distributed to them. One was given to each.

The discontent of the captains of the schooners must be attributed, according to the depositions of the Captain of the "Zabiaka," to the fact that the Captain of the "Majestic" who was accompanied by his grown up daughter, found it impossible to put them up in his cabin. He was obliged to arrange berths for them in the cabins used for the stores.

The Commission concluded from the above evidence that the claim of the Captain of the "Majestic" of 10 dollars a-head for passage money could not be admitted, being contrary to the terms of the agreement concluded and signed by him.

With regard to the patrol sent ashore by Captain de Livron, this step was taken at the request of the district Governor of Petropavlovsk. The local police were no doubt insufficient to repress the disturbances committed by the men of the schooner in the streets of the town.

The conduct of these seamen was most disorderly. Several times the Captain of the "Zabiaka" appealed to the captains of the vessels seized, begging them to restore order, but they declared that the crews would not obey them. The captains of the "Willie McGowan" and the "Rosie Olsen" themselves came in a state of intoxication to see Captain de Livron, and used such abusive language to him that the sailors of the cruiser had to turn them out of the captain's cabin.

These questions are still under diplomatic considerations.

The Protective Zone of 1893, on Russian Coasts and Islands.

Entirely without retroactive force, as regards the British vessels seized by Russian authorities during 1892, and without prejudice to the rights and position of either power, a provisional agreement for the protection of seals was entered into between Great Britain and Russia for the year 1893. This agreement took the form of an exchange of notes and the terms were as follows:—

I.

During the year ending 31st December, 1893, the English government will prohibit their subjects from killing or hunting seal within a zone of 10 marine miles on all the Russian coasts of Behring Sea and the North Pacific Ocean; as well as within a zone of 30 marine miles round the Komandorsky Islands and Tulèneu (Robben Island).

II.

British vessels engaged in hunting seals within the aforesaid zones, beyond Russian territorial waters, may be seized by Russian cruisers, to be handed over to British cruisers or to the nearest British authorities. In case of impediment or difficulty, the commander of the Russian cruiser may confine himself to seizing the papers of the aforementioned vessels in order to deliver them to a British cruiser, or to transmit them to the nearest British authorities on the first opportunity.

III.

Her Majesty's government engage to bring to trial, before the ordinary tribunals, offering all necessary guarantees, the British vessels which may be seized as having been engaged in sealing within the prohibited zones beyond Russian territorial waters.

IV.

The Imperial Russian government will limit to 30,000 the number of seals which may be killed during the year 1893, on the coasts of the Islands of Komandorsky and Tulèneu (Robben Islands).

V.

An agent of the British government may visit the aforementioned Islands (Komandorsky and Tulèneu) in order to obtain from the local authorities all necessary information on the working and results of the agreement arrived at, but care should be taken to give previous information to these authorities of the place and time of his visit, which should not be prolonged beyond a few weeks.

VI.

The present arrangement has no retroactive force as regards British vessels captured previously by the cruisers of the Imperial Russian Marine.

LEGISLATION TO GIVE EFFECT TO PROVISIONAL AGREEMENT.

For the purpose of giving effect to the above agreement the following legislation was enacted by the Imperial Parliament.

[56 VICT.]

Seal Fishery (North Pacific) Act 1893.

[CHAP. 23.]

CHAPTER 23.

An Act to provide for prohibiting the Catching of Seals at certain periods in Behring's Sea and other parts of the Pacific Ocean adjacent to Behring's Sea.

Whereas it is expedient to extend the Sea Fishery (Behring's Sea) Act, 1891, to other waters of the North Pacific Ocean adjacent to Behring's Sea, and for that purpose to repeal and re-enact that Act:

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1.—(1.) Her Majesty the Queen may, by Order in Council, prohibit during the period specified by the Order, the catching of seals by British ships in such parts of the seas to which this Act applies as are specified by the Order.

(2.) While an Order in Council under this Act is in force—

(a.) a person belonging to a British ship shall not kill, take, or hunt, or attempt to kill or take, any seal during the period and within the seas specified by the Order; and

(b.) a British ship shall not, nor shall any of the equipment or crew thereof, be used or employed in such killing, taking, hunting, or attempt.

(3.) If there is any contravention of this Act, any person committing, procuring, aiding, or abetting such contravention shall be guilty of a misdemeanour within the meaning of the Merchant Shipping Act, 1854, and the ship and her equipment, and everything on board thereof, shall be forfeited to Her Majesty as if an offence had been committed under section one hundred and three of the said Act, and the provisions of sections one hundred and three and one hundred and four, and Part Ten of the said Act and of section thirty-four of the Merchant Shipping Act, 1876 (which are set out in the schedule to this Act) shall apply as if they were herein re-enacted, and in terms made applicable to an offence and forfeiture under this Act, and any commissioned officer on full pay in the naval service of Her Majesty the Queen may seize the ship's certificate of registry.

(4.) Any commissioned officer on full pay in the naval service of Her Majesty the Queen shall have power, during the period and in the seas specified by the Order, to stop and examine any British ship, and to detain her, or any portion of her equipment, or any of her crew, if in his judgment the ship is being or is preparing to be used or employed in contravention of this section.

(5.) For carrying into effect an arrangement with any foreign State, an Order in Council under this Act may provide that such officers of that State as are specified in the Order may exercise the like powers under this Act as may be exercised by such a commissioned officer as aforesaid in relation to a British ship, and the equipment and crew and certificate thereof, and that such British officers as are specified in the Order may exercise, with the necessary modifications, the powers conferred by this Act in relation to a ship of the said foreign State, and the equipment and crew and papers thereof.

(6.) If during the period and within the seas specified by the Order a British ship is found having on board thereof fishing or shooting implements or seal skins or bodies of seals, it shall lie on the owner or master of such ship to prove that the ship was not used or employed in contravention of this Act.

2.—(1.) Where an officer has power under this Act to seize a ship's certificate of registry, he may either retain the certificate and give a provisional certificate in lieu thereof, or return the certificate with an indorsement of the grounds on which it was seized, and in either case may direct the ship, by an addition to the provisional certificate or to the indorsement, to proceed forthwith to a specified port, being a port where there is a British court having authority to adjudicate in the matter, and if this direction is not complied with, the owner and master of the ship shall, without prejudice to any other liability, each be liable to a fine not exceeding one hundred pounds.

(2.) Where in pursuance of this section a provisional certificate is given to a ship, or the ship's certificate is indorsed, any British officer of customs or British consular officer may detain the ship until satisfactory security is given for her appearance in any legal proceedings which may be taken against her in pursuance of this Act.

3.—(1.) A statement in writing, purporting to be signed by an officer having power in pursuance of this Act to stop and examine a ship, as to the circumstances under which or grounds on which he stopped and examined the ship, shall be admissible in any proceedings, civil or criminal, as evidence of the facts or matters therein stated.

(2.) If evidence contained in any such statement was taken on oath in the presence of the person charged in the evidence, and that person had an opportunity of cross-examining the person giving the evidence and of making his reply to the evidence, the officer making the statement may certify that the evidence was so taken and that there was such opportunity as aforesaid.

4.—(1.) Her Majesty the Queen in Council may make, revoke, and alter Orders for the purpose of this Act, and every such Order shall be forthwith laid before both Houses of Parliament and published in the *London Gazette*.

(2.) Any such Order may contain any limitations, conditions, qualifications, and exceptions which appear to Her Majesty in Council expedient for carrying into effect the object of this Act.

5.—(1.) This Act shall apply to the animal known as the fur-seal, and to any marine animal specified in that behalf by an Order in Council under this Act, and the expression "seal" in this Act shall be construed accordingly.

(2.) This Act shall apply to the seas within that part of the Pacific Ocean known as Behring's Sea, and within such other parts of the Pacific Ocean as are north of the forty-second parallel of latitude.

(3.) The expression "equipment" in this Act includes any boat, tackle, fishing or shooting instruments, and other things belonging to a ship.

(4.) This Act may be cited as the Seal Fishery (North Pacific) Act, 1893.

(5.) The Seal Fishery (Behring's Sea) Act, 1891, is hereby repealed, but any Order in Council in force under that Act shall continue as if it had been made in pursuance of this Act.

Under section 1 of the foregoing Act, an Imperial Order in Council was passed. The text of this Order in Council is as follows:

SEAL FISHERY (NORTH PACIFIC) ORDER IN COUNCIL, 1893.

Windsor, 4th July, 1893.

At the Court at Windsor, the 4th day of July, 1893.

Present.

The QUEEN'S Most Excellent Majesty.

Lord President.
Lord Steward.

Lord Kensington.
Lord Vivian.

Whereas by "The Seal Fishery (North Pacific) Act, 1893," it is enacted that Her Majesty the Queen may by Order in Council prohibit during the period specified by the Order the catching of seals by British ships in such parts of the seas to which that Act applies as are specified by the Order; and that for carrying into effect an arrangement with any foreign State an Order in Council may provide that such officers of that State as are specified in the Order may exercise the like powers under the Act as may be exercised by a Commissioned Officer on full pay in the Naval Service of Her Majesty in relation to a British ship and the equipment and crew and certificate thereof; and that any such Order may contain any limitations, conditions, qualifications, and exceptions which appear to Her Majesty in Council expedient for carrying into effect the object of the said Act:

And whereas the said Act applies to the seas within that part of the Pacific Ocean known as Behring's Sea, and within such other parts of the North Pacific Ocean as are north of the forty-second parallel of north latitude:

And whereas an arrangement has been made between Her Majesty the Queen and His Imperial Majesty the Emperor of Russia, whereby British ships engaged in hunting seals within such parts of the said seas as are hereinafter specified may be seized by Russian cruisers:

Now, therefore, Her Majesty, in virtue of the powers vested in Her by the said recited Act, and of all other powers enabling Her in that behalf, is hereby pleased, by and with the advice of Her Privy Council, to order, and it is hereby ordered, as follows:—

1. From and after the fourth day of July, one thousand eight hundred and ninety-three, until the first day of January, one thousand eight hundred and ninety-four, the catching of seals by British ships is hereby prohibited within such parts of the seas to which the recited Act applies as are comprised within the following zones, that is to say (i) a zone of ten marine miles on all the Russian coasts of Behring Sea and the North Pacific Ocean, and (ii) a zone of thirty marine miles round the Komandorsky Islands and Tulénew (Robben Island).

2. The powers which under the recited Act may be exercised by any Commissioned Officer on full pay in the Naval Service of Her Majesty may be exercised by the Captain or other Officer in command of any war vessel of His Imperial Majesty the Emperor of Russia in relation to a British ship, and the equipment and crew and certificate thereof.

3. This Order may be cited as "The Seal Fishery (North Pacific) Order in Council, 1893."

C. L. PEEL.

SEIZURES OF BRITISH SHIPS UNDER THE AGREEMENT WITH RUSSIA, 1893.

The following vessels of the Canadian sealing fleet being it is alleged by Russian authorities found within the protective zone of 30 miles, were this year seized:

Schr. "Minnie" of Victoria, B.C., seized by the Russian transport "Yakout" on 17th July, in latitude 54° 21' north, longitude 168° 38' east, 21 miles south-east of Copper Island.

Schr. "Ainoko," of Victoria, B.C., seized by the Russian Transport "Yakout" on the 22nd July, in latitude 54° 23' north, longitude 168° 32' east, 16 miles south of Copper Island.

Schr. "Maud S." of Victoria, B.C., seized by the Russian Transport "Yakout" 29th August, 22 miles south-west of Copper Island.

After the papers of these vessels had been taken from them, they were ordered to Yokohama for adjudication, their papers being delivered there by Her Majesty's cruisers doing duty in those waters.

The master of the "Maud S." complying with the instructions of the seizing officer, sailed for Yokohama and reported to Her Majesty's Consul at that port. Formal proceedings were instituted against the vessel under the Act and Order in Council above quoted, and she was acquitted.

The schooners "Ainoko" and "Minnie" proceeded to Victoria where their cases are now pending before the courts.

The only other interference with the Canadian fleet, reported this year, was in the case of the steam schooner "Warlock," of Victoria, B.C.

This vessel put into the port of Petropausovski on the Kamtschatkan Coast, for fuel and water after a rough voyage from Sand Point, along the Aleutian Islands during which no seal skins had been procured.

Her papers and sealing equipment were removed from her by the Russian cruiser "Zabiaka," and she was given a provisional clearance to Yokohama, where her captain was informed his original papers and equipment would be returned to him on application to H. M. Consul.

This vessel was not seized and no charge laid against her. The action of the Russian authorities being explained to the master as a safeguard against a possible breach of the agreement, the master of the "Warlock" having announced it as his intention to reach Yokohama as soon as possible.

In addition to the above, the British schooner "Arctic," of Shanghai, was seized by the Russian cruiser "Zabiaka" having it is said been found within the protective zone around the Commander Islands. Her case came before the Court of Yokohama for adjudication.

OPERATIONS OF THE FLEET DURING 1893.

As a consequence of the continued closure of the American side of the Behring Sea, pending the result of Arbitration, the sealing fleet pursued their vocation along the North American Coast, on the Japan Coast and in the vicinity of Commander Islands. (Russian.)

REPORT of British Columbia Sealing Fleet, Season 1893.

Vessels.	Tons.	CREWS.		Boats.	Canoes.	Masters.	CATCH.			Totals.
		White	Indian.				B.C. Coast.	Japan Coast.	Russian side.	
<i>Victoria, B.C.</i>										
Triumph	98	7	28	4	14	C. N. Cox.....	1,713		623	2,336
Sapphire	108	8	26	12	3	Wm. Cox.....	1,262		341	1,603
E. B. Marvin.....	117	27		8		I. Gould.....	1,014		517	1,531
Mascot	40	7	14	2	7	H. F. Siewerd..	857		327	1,184
Dora Siewerd..	94	24		7		R. O. Lavender..	1,426		434	1,860
Labrador.....	25	11		4		J. J. Whiteley..	263			263
Minnie	46	5	20	2	10	J. Mohrhouse..	489		20	509
Annie E. Paint..	82	23		8		A. Bissett.....	740		401	1,141
Mischief.....	45	6	20	2	10	W. Petit.....	344			344
Diana	50	19		6		A. Nelson.....	707		294	1,001
Venture	48	4	16	2	8	G. McDonald ..	82			82
Mermaid	73	23		8		W. H. Whiteley..		940	315	1,255
Fawn	59	3	21	2	10	L. Magnesen ..	806		77	883
Walter A. Earle..	68	23		6		T. Magnesen ..	1,622			1,622
Beatrice	66	5	24	2	12	D. Macauley....	655			655
Ocean Belle.....	83	25		8		T. O'Leary.....	1,316		547	1,863
Mountain Chief..	23	1	19		9	J. Nawassum....	128			128
Arietis	86	23		7		A. Douglass....		920	464	1,384
Cape Beale	13		10		5	J. E. Quap.....	86			86
Kate	58	7	16	2	8	J. Foster.....	293			293
Favourite.....	80	7	26	3	13	L. McLean.....	949			949
Borealis	37	6	20	2	10	G. Meyer.....	1,307			1,307
Ainako	75	5	14	1	7	G. Heater.....	1,344		46	1,390
W. P. Sayward..	64	5	16	1	8	G. Ferey.....	596			596
Katharine	82	6	19	2	9	W. D. McDougall	352		363	715
San Jose.....	31	4	16	2	8	R. E. Crowell ..	242			242
Enterprise.....	69	24		7		J. W. Todd.....		1,027	274	1,301
Agnes McDonald.	107	25		7		M. F. Cutler....		2,333	433	2,766
Victoria	63	6	20	2	10	H. V. Hughes...	420			420
Rosie Olsen	39	5	24	2	12	A. B. Whidden..	658			658
Wanderer	25	4	16	1	8	H. Paxton.....	206			206
Viva	92	23		6		J. W. Anderson..	1,441		30	1,471
May Belle.....	58	20		5		C. J. Harris.....	1,852			1,852
Umbrina	98	24		7		C. Campbell.....	1,827		625	2,452
Penelope	70	20		6		F. Cole.....	2,291			2,291
Vera	60	19		5		W. Shields.....	1,910		99	2,009
Pioneer	66	6	23	1	11	J. McLeod.....	1,050			1,050
Otto	86	8	24	2	12	M. Keefe.....	630		397	1,027
Mary Taylor.....	42	18		5		E. Shields.....	845		240	1,085
Brenda.....	100	26		8		C. E. Locke.....	845		408	1,253
Libbie	93	23		7		F. Hackett.....		1,242	389	1,631
City of San Diego.	46	14		5		M. Pike.....		942	101	1,043

The following table shows the result of the operations of the Canadian sealeries this year :—

The total result of the fur sealing industry for the year 1893, from all sources on the North Pacific Ocean, is shown by the following summary :—

Summary of Catch of Pacific Coast sealing fleet, season, 1893—

Catch of Victoria, British Columbia fleet, consisting of 53 vessels : tonnage, 3,643 ; crews, white, 806 ; crews, Indian, 432 ; No. of boats, 256 ; No. of canoes, 204.....	67,822
Catch of Vancouver, British Columbia vessels, consisting of 2 vessels : tonnage, 100 ; crews, white, 41 men ; No. of boats, 11.....	2,010
Catch of American vessels that landed their skins at Victoria, British Columbia, consisting of 2 vessels....	260
Total British Columbia catch.....	70,092
Catch of American vessels that landed their skins at Puget Sound ports, U.S.A.....	6,855
Catch of Pelagic sealing vessels that landed their skins at San Francisco, U.S.A.....	2,748
Catch from Pribiloff Islands, landed at San Francisco, U.S.A.....	7,425
Catch from Petropaulski, by Russian Seal-skin Company, landed at San Francisco.....	33,193
Total number of seal-skins landed at San Francisco, U.S.A., and Puget Sound...	50,221
Catch of American vessels landed at Hakodate, Japan....	18,587
Catch of Hawaiian vessels landed at Hakodate, Japan	3,212
Grand Total	142,112

Victoria, B.C., 18th November, 1893.

THE FISHERIES PROTECTION SERVICE.

The work of this branch of the service has been very satisfactorily performed this season.

The fleet was under the direction of Captain O. G. V. Spain, Commanding the "Acadia," who has since been appointed Commander of the Fisheries Protection Service in place of the late Lieut. A. R. Gordon, R.N.

The report of this officer forms Appendix No. 3 of this report and deals fully with the season's operations.

The cost of this service for the fiscal year ending 30th June, 1893, is \$106,805.39.

The fleet was this year composed of the five Government steamers "Acadia," "La Canadienne," "Stanley," "Curlew," "Constance," and the schooners "Vigilant" and "Kingfisher," the latter being the only chartered vessel in the whole fleet. This vessel has been recently purchased, and added to the fleet.

The following table shows the number of United States fishing vessels which took advantage of the *modus vivendi* licenses permitting them to purchase bait, ice and supplies as well as ship men and tranship cargoes of fish.

Year.	No of Vessels.	Tonnage.	Amount collected.
1888	36	2,554	3,831
1889	78	6,393	9,589
1890	119	9,641	14,461
1891	98	7,399	11,098
1892	108	8,940	13,410
1893	71	6,088	9,130

The complete list of vessels for which licenses were issued during 1893, will be found in Appendix No. 3, of this report.

A glance at the long list of United States vessels calling at Canso and Sand Point, Appendix No. 3, will show the importance of our ports to foreign fishing vessels as well as to the Canadian fleet.

Two United States fishing vessels, the "Lawrence A. Monro" and the "Lewis H. Giles" were seized during the season of 1893, the former for violation of Custom laws and the latter for fishing inside the three mile limit. Both these vessels were subsequently released on payment of fines.

During this season Commander Spain devoted special attention to the enforcement of the lobster close season.

FISHERIES INTELLIGENCE BUREAU.

This service, which originated in 1889, has now 55 stations, sending daily reports of the movements of fish, etc., to the central office at Halifax, from where said reports are telegraphed to the principal fishing centres of the Maritime Provinces.

These bulletins are of great importance especially to the fishermen seeking fresh bait to pursue deep-sea fishing. Through this information the Commander of the Fisheries Protection Service is kept advised of the movements of fish, which enables him to better dispose of his cruisers and exercise proper supervision of the foreign fishing fleet.

A detailed statement of this season's work by Mr. Hutchins, forms Appendix No. 4 of this report.

Instructions have been given for the analysis of the bulletins for the last four years which it is hoped will be useful to fishermen in showing to some extent the places and periods where fish are generally found.

THE NEWFOUNDLAND QUESTION.

In the annual report of the Department of Fisheries for the year 1891, at page c, under the heading "Newfoundland Bait Act," a review of the question brought the case down to the point where an opinion had been obtained to the effect that the amount of fees collected from Canadian vessels under that Act could, in each case, be recovered back. It was shown that a statement of the license fees paid by Canadian fishing vessels was being prepared, and that the Department of Justice had the matter in hand.

In the meantime the report of the Department of Marine and Fisheries for 1892, at page 71, resumed the review of the question down to the agreement for a contemporaneous removal of duties by Canada, and restrictions as to bait and bait-fishes by Newfoundland; showing the manner in which this was done by the Canadian Government.

A conference was held at Halifax to discuss the several questions between the colony of Newfoundland and the Dominion of Canada. The first meeting took place on the 9th November, 1892.

The detailed proceedings at this conference are published, and will be found at No. 246, page 26, "Papers in reference to various questions affecting Newfoundland and Canada, including the conference at Halifax, held during November, 1892." (Sessional Papers, No. 20 *d, e, f*, 1893.)

During the year just past, Newfoundland resumed the policy of issuing licenses to United States fishing vessels, on the terms set out in the *modus vivendi* to the unratified Treaty of Washington of 1888; although no arrangement has yet been effected to make such licenses, and those issued by the Canadian Government, concurrent in the waters of Newfoundland and Canada.

Such is the present position of the question.

The legal proceedings, however, for the recovery of license fees exacted, which had been begun on behalf of Canadian vessel owners for past acts, long prior to any arrangement for an adjustment of the growing difficulties, or for the conference at Halifax, proceeded in due course.

Information has reached the department that in the action of *Stoneman vs. the Government of Newfoundland*, claiming a return of license fees paid by the owners of the schooner "Wapiti," judgment was delivered by the Supreme Court of Newfoundland in favour of the plaintiff.

The absence of the text of the judgment renders it impossible to form any opinion as to whether that decision may be taken as indicating the result of all the other cases, but it is assumed that this case will lead to the settlement of all similar claims.

SUMMARY OF THE FISHERIES OF CANADA FOR THE YEAR 1893.

On page xviii of this report it will be seen that the Inspectors of Fisheries prepared preliminary reports in which there was an approximation of the yield of the several fisheries. Since the preliminary reports were put in type the complete reports and returns for the calendar year have been received. The reports of the inspectors for several years past have appeared as a supplement to the annual report, but it was deemed advisable to publish them as part of this report for the year 1893. Some delay was thereby caused, as it is always necessary to compile the tabular statement of the yield in each province from the returns sent in by inspectors of divisions. The compilation required care and consumed much time in preparation, but it is believed that the fuller information thus presented will compensate for any delay in the publication of the report.

VALUE OF THE FISHERIES FOR 1893.

The total catch of the Canadian fisheries for the calendar year 1893 is valued at \$20,686,660, subdivided as follows:—

Nova Scotia.....	\$ 6,407,279
New Brunswick.....	3,746,121
British Columbia.....	4,443,963
Quebec.....	2,218,905
Ontario.....	1,694,930
Prince Edward Island.....	1,133,368
Manitoba and North-west Territories.....	1,042,093

These figures do not comprise the quantity of fish consumed by the Indians of British Columbia, which is estimated at about \$3,000,000.

The total value thus shows an increase of \$1,500,000 over 1892. This large increase is entirely due to the enormous catch of salmon in British Columbia. It must be remarked, however, that there was a decrease in the output of the British Columbia canneries in 1892, from the previous year, of 3,600,000 cans.

Ontario shows the largest falling off in 1893, namely, \$347,000, but this is more than made up by the increase of over \$500,000 in New Brunswick.

The yield in the other provinces differs but slightly from the previous year.

MEN ENGAGED IN FISHING, AND CAPITAL INVESTED IN THE FISHING INDUSTRY.

The men engaged in fishing in Canada number 67,753, and the fishing gear represents a capital of \$8,681,557, permanently invested.

There are 1,104 fishing vessels of 40,096 tons in the aggregate. These vessels are manned by 8,899 sailors. Other fishermen number 58,854, who use 31,508 boats and 5,406,800 fathoms of gill-nets and seines. These nets are valued at \$1,637,707, and to this must be added other fishing gear, such as pound and trap nets, weirs, etc. The lobster plant alone represents a value of \$1,343,835, consisting of 682 lobster canneries, along the coasts of the Maritime Provinces, using 892,680 traps, etc.

More than 100 vessels and 1,000 boats, employing over 3,000 more men, were employed than last year, thus showing an increase of capital invested of \$1,000,000.

DETAILS.

The following table shows the relative value of the principal kinds of commercial fishes as well as the increase or decrease of each :—

Kinds of Fish.	Amount, 1893.	Increase over 1892.	Decrease from 1892.
	\$	\$	\$
Cod	4,028,448		35,010
Salmon	3,890,644	1,647,797	
Lobsters	2,484,568	492,739	
Herring	1,852,891		182,739
Whitefish	1,298,744		199,779
Mackerel	1,096,066		250,911
Seals	874,842	241,723	
Trout	658,614		52,498
Haddock	446,320		140,204
Smelts	414,174	178,216	
Hake	367,823		24,368
Pollock	241,581	18,699	
Sardines	218,018	99,805	
Halibut	215,367		59,840
Alewives	212,714	44,535	
Pike	209,688		14,565
Pickrel	157,410		31,163
Oysters	156,440		11,219
Eels	118,793	15,632	
Sturgeon	105,795	15,255	
Bass	79,201	30,868	
Shad	77,076		22,816
Tom cod or frost fish	77,070	52,970	
Clams	68,658	50,024	
Squid	43,744	4,568	

The above table shows at a glance which particular branch of the fisheries prospered, remained stationary or failed.

The most striking fluctuation is the extraordinary increase of over a million and a half of dollars in the salmon yield of British Columbia where the unprecedented pack of over twenty-nine million 1-lb. cans is reported. This value would be still higher had not the prices of last year been considerably reduced.

The sealing industry fared better than last year, showing an increase in value of nearly a quarter of a million of dollars. The British Columbia fleet captured about 24,000 fur-seals more than in 1892.

Smelts also show the large increased value of \$178,000 over that of the preceding year. This increase was in New Brunswick, where the smelt industry is most extensively carried on, and where the catch of 1893 reached seven million pounds, being nearly double that of the previous season.

The sardine industry showing an improvement to the extent of \$100,000 is also to be credited to New Brunswick.

LOBSTERS.

Notwithstanding the enormous drain of the past fifteen years on the lobster supply, an increase of nearly half a million dollars is returned over the value of 1892. This increase is general in all the Maritime provinces, but it is more noticeable in Nova Scotia. About 88,000,000 of these crustaceans were captured this season to fill the 13,674,713 cans* besides the 7,347 tons shipped fresh or alive.

The catch of mackerel, which in 1892 showed a decrease of over half a million dollars, has this year shown a further decline of a quarter of a million dollars. This

* This is based on allowing six lobsters to a can and 2½ lbs. for average weight of shell lobsters sold fresh.

shortage is general in all the Maritime provinces; the Magdalen Islands being the only locality showing an increase.

The other sea fish which show a considerable diminution are herring, haddock and halibut.

Of the fresh water fish, whitefish show a decrease in value of \$200,000 as compared with the catch of the previous year. This is due to a smaller catch in Ontario waters, which yielded over a million lbs. less than in 1892. In Manitoba and the North-west Territories the catch of whitefish was about the same as last year, namely 15,500,000 lbs.

The large decrease noticed in trout was owing to a smaller catch in Ontario alone where salmon-trout yielded half a million lbs. less than in the preceding year.

The increase or decrease of the other principal kinds of fish are not sufficiently marked to be specially noticed.

The quantity of fish oil obtained is nearly as large as last year, being 804,820 gallons, valued at \$321,927. The value of fish used for bait was nearly \$300,000.

COMPARATIVE STATEMENT

RECAPITULATING the Yield and Value of the Fisheries in the Dominion of Canada for the Years 1892 and 1893.

Kinds of Fish.		1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
			\$ cts.		\$ cts.
Cod.....	Cwt.	880,184	4,050,468 00	892,978	4,019,193 00
do tongues and sounds.....	Brls.	1,299	12,990 00	925½	9,255 00
Salmon, preserved, in cans.....	Lbs.	11,514,622	1,382,535 04	29,233,317	2,926,502 35
do fresh.....	"	5,430,749	791,600 70	7,149,123	890,693 80
do pickled.....	Brls.	3,132	40,660 00		63,360 00
do smoked.....	Lbs.	140,258	28,051 60	150,710	10,088 40
Lobsters, preserved, in cans.....	"	12,524,498	1,753,429 30	13,674,713	1,914,457 80
do in shell, alive, &c.....	Tons.	6,012½	238,400 00	7,347¼	570,110 00
Herring, pickled.....	Brls.	300,223	1,351,005 00	316,746	1,425,812 00
do fresh or frozen.....	Lbs.	9,748,240	383,029 60	13,854,974	317,631 12
do smoked.....	"	14,975,675	301,595 75	5,437,620	109,448 40
Whitefish.....	"	23,776,763	1,498,523 42	21,390,289	1,298,744 10
Mackerel, pickled.....	Brls.	95,044	1,330,618 00	67,912	904,832 00
do fresh and preserved.....	Lbs.	136,330	16,359 60	2,172,097	191,234 14
Trout.....	"	6,933,819	692,042 40	6,504,639	650,463 90
do pickled.....	Brls.	1,907	19,070 00	815	8,150 00
Haddock.....	Cwt.	167,578	586,524 60	133,234	466,319 50
Smelts.....	Lbs.	4,719,193	235,958 75	8,283,481	414,174 00
Hake.....	Cwt.	116,711	350,133 00	107,518	322,554 00
do sounds.....	Lbs.	84,117	42,058 50	90,539	45,269 50
Pollock.....	Cwt.	74,294	222,882 00	80,527	241,581 00
Halibut.....	Lbs.	3,430,809	275,207 50	2,840,619	215,366 80
Alewives.....	Brls.	37,684	168,179 50	47,281	212,714 00
Pike.....	Lbs.	9,682,570	224,253 83	8,737,605	209,688 25
Sardines.....	Brls.		118,213 50	100,879	205,518 00
do preserved.....	Cans.			250,000	12,500 00
Pickrel.....	Lbs.	3,893,190	188,573 57	3,848,304	157,409 65
Oysters.....	Brls.	55,953	167,659 00	51,080	156,440 00
Sturgeon.....	Lbs.	1,628,435	90,540 60	1,860,477	105,795 12
Coarse and mixed fish.....	Brls.		185,884 95	44,458	162,113 50
Eels, pickled.....	"	4,891	48,910 00	8,259	82,590 00
do fresh.....	Lbs.	906,755	54,251 30	941,150	56,203 00
Bass.....		805,560	48,333 40	1,131,091	79,201 08
Shad.....	Brls.	9,989	99,892 44	7,708	77,076 60
Tom cod or frost fish.....	Lbs.	857,000	24,100 00	1,611,428	77,070 90
Clams.....			18,634 00		68,657 80
Squid.....	Brls.	9,794	39,176 00	10,936	43,744 00
Maskinongé.....	Lbs.	541,250	32,475 00	505,495	30,329 70
Mixed fish (British Columbia).....			50,046 00		22,533 50
Flounders.....	Lbs.	200,000	10,010 00	405,450	20,272 50
Crabs.....	No.		30,000 00		18,000 00
Oulachons.....	Lbs.	372,300	19,045 00	298,300	17,934 00
Winninish.....	"	100,000	6,000 00	100,000	6,000 00
Fur seal skins in British Columbia.....	No.	46,362	602,706 00	70,332	843,984 00
Hair seal skins.....	"	25,671	30,413 75	26,349	30,858 50
Sea otter skins.....	"	14	2,100 00	15	1,875 00
Porpoise skins.....	"	316	1,318 00	251	1,004 00
Fish oil.....	Galls.	836,699	359,904 20	804,820	321,927 40
Fish used as bait.....	Brls.	243,744	313,125 50	224,430	294,270 00
do manure.....	"	138,324	69,164 00	147,732	73,867 00
Fish guano.....	Tons.	2,774	37,475 00	1,510¾	26,693 75
Home consumption not included in return.....			296,644 00		256,149 20
Total.....			18,941,171 30		20,686,661 26

RECAPITULATION

Of the Total Value in each Province for the Years 1892 and 1893.

Provinces.	Value.		Decrease.	Increase.
	1892.	1893.		
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Nova Scotia	6,340,724 01	6,407,279 49	...	66,555 48
New Brunswick	3,203,922 00	3,746,121 40	...	542,199 40
British Columbia	2,849,483 64	4,443,963 20	...	1,594,479 56
Quebec	2,236,732 06	2,218,905 21	17,826 85	...
Ontario	2,042,198 53	1,694,930 70	347,267 83	...
Prince Edward Island	1,179,856 68	1,133,368 26	46,488 42	...
Manitoba and North-west Territories	1,088,254 38	1,042,093 00	46,161 38	...
Totals.	18,941,171 30	20,686,661 26	457,744 48	2,203,234 44
Increase .....	...	...	...	1,745,489 96

COMPARATIVE STATEMENT

OF production in each Branch of the Fisheries in the respective Provinces of the Dominion of Canada.

PROVINCE OF NOVA SCOTIA.

Kinds of Fish.	1892.		1893.	
	Quantity.	Value.	Quantity.	Value.
		\$ cts.		\$ cts.
Salmon, salted.....	Brls. 320	5,120 00	266	4,256 00
do fresh.....	Lbs. 400,996	80,199 00	521,230	104,245 20
do canned.....	" 2,590	388 00	5,704	855 80
do smoked.....	" 3,308	661 60	4,490	898 00
Herring, salted.....	Brls. 155,529	699,882 00	122,096	549,431 00
do smoked.....	Lbs. 278,300	5,902 00	296,600	5,932 00
do fresh.....	"		668,620	5,367 50
Mackerel, salted.....	Brls. 49,601	694,416 00	34,844	441,880 00
do fresh.....	Lbs.		1,739,722	140,429 14
Lobsters, preserved.....	" 5,372,672	752,173 66	5,935,535	830,972 88
do fresh and alive.....	Tons. 4,880	193,100 00	6,131 ³ / ₄	483,710 00
Cod, dried.....	Cwt. 559,054	2,515,746 00	546,448	2,459,016 00
do tongues and sounds.....	Brls. 1,066	10,660 00	624	6,240 00
Hake, dried.....	Cwt. 55,550	166,650 00	58,210	174,630 00
do sounds.....	Lbs. 35,846	17,923 00	45,790	22,895 00
Haddock, dried.....	Cwt. 126,296	442,036 00	106,396	372,386 00
do fresh.....	Lbs. 40,000	8,000 00	210,000	4,200 00
do preserved.....	" 1,264	6,320 00	181,400	21,768 00
do smoked (finnan haddies).....	Cases. 16,084	38,601 60	3,170	7,608 00
Pollock.....	Cwt. 58,015	174,045 00	66,857	200,571 00
Trout.....	Lbs. 152,450	15,245 50	147,459	14,745 90
Halibut.....	" 1,560,534	156,055 00	1,096,340	109,633 90
Smelts.....	" 338,225	16,910 35	366,202	18,310 05
Bass.....	" 16,370	982 00	8,685	520 72
Alewives.....	Brls. 15,592	70,165 50	21,922	98,648 50
do smoked (per 100).....	No. 50,000	400 00	50,000	400 00
Oysters.....	Brls. 3,776	11,328 00	3,488	10,464 00
Clams.....	"	309 00	2,556	17,665 00
Eels.....	" 2,627	26,270 00	3,168	31,680 00
Shad.....	" 2,755	27,550 00	1,995	19,950 00
Squid.....	" 9,503	38,012 00	10,517	42,068 00
Flounders.....	Lbs.		59,750	2,987 50
Frost fish.....	"	2,000 00	51,545	2,576 75
Coarse and mixed fish.....	Brls.	275 00	4,532	8,180 00
Fish oils.....	Galls. 225,197	90,078 80	300,375	120,149 40
do bait.....	Brls. 64,629	55,803 00	65,652	56,103 00
do as manure.....	" 20,880	10,441 00	13,898	6,950 00
do guano.....	Tons. 283	7,075 00	300 ³ / ₄	7,518 75
Seal skins.....	No.		1,149	1,436 50
Total.....		6,340,724 01		6,407,279 49
Increase in 1893.....				66,555 48

COMPARATIVE STATEMENT of Production in each Branch of Fisheries, &c.—Continued.

PROVINCE OF NEW BRUNSWICK.

Kinds of Fish.	1892.		1893.	
	Quantity.	Value.	Quantity.	Value.
		\$ cts.		\$ cts.
Salmon, salted..... Brls.	58	928 00	109	1,744 00
do fresh..... Lbs.	1,405,170	281,034 00	2,419,205	483,841 00
do canned..... "	23,440	3,516 00	41,205	6,180 75
do smoked..... "	1,450	290 00	2,980	596 00
Herring, salted..... Brls.	95,040	427,680 00	121,478	546,651 00
do fresh..... Lbs.	440,000	3,300 00	4,630,850	48,496 50
do smoked..... "	14,641,000	292,820 00	5,084,920	101,698 40
Mackerel, salted..... Brls.	18,725	262,150 00	10,573	148,022 00
do fresh..... Lbs.	128,810	15,457 20	387,175	45,381 00
Lobsters, preserved in cans..... "	3,204,320	448,604 80	3,373,370	472,271 80
do alive or fresh..... Tons.	1,132½	45,300 00	1,213½	86,320 00
Cod, dried..... Cwt.	74,547	335,461 50	73,226	329,517 00
do tongues and sounds..... Brls.	109	1,090 00	46½	465 00
Hake, dried..... Cwt.	37,615	112,845 00	41,114	123,342 00
do sounds..... Lbs.	41,615	20,807 50	37,834	18,917 00
Haddock..... Cwt.	16,433	57,515 50	13,455	47,092 50
Pollock..... "	16,279	48,837 00	13,670	41,010 00
Trout..... Lbs.	109,760	10,976 00	163,060	16,306 00
Halibut..... "	385,530	38,553 00	203,864	20,386 40
Smelts..... "	3,914,860	195,743 00	7,109,365	355,468 25
Bass..... "	55,870	3,352 20	283,400	28,340 00
Alewives..... Brls.	21,155	95,197 50	24,690	111,105 00
Oysters..... "	17,840	53,520 00	16,365	49,095 00
Ciams..... "		8,700 00	10,104	17,751 00
do canned and shelled..... Lbs.			260,536	13,026 80
Eels..... Brls.	1,370	13,700 00	4,391	43,910 00
Shad..... "	6,518	65,180 00	5,055	50,550 00
Squid..... "	291	1,164 00	419	1,676 00
Sardines..... "		99,247 50	96,119	191,238 00
do preserved..... Cans.	150,000	6,000 00	250,000	12,500 00
Pickarel..... Lbs.	118,000	5,900 00	131,300	6,565 00
Flounders..... "	200,000	10,010 00	345,600	17,280 00
Frost fish..... "	292,000	14,600 00	1,385,050	69,252 50
Coarse fish..... Brls.	193	489 00	3,590	7,360 00
Fish oils..... Galls.	80,897	32,358 80	70,070	28,028 00
Seal skins..... No.			2	2 00
Fish bait..... Brls.	58,540	77,760 00	63,871	95,806 50
do manure..... "	44,247	22,123 50	38,358	19,179 00
do guano..... Tons.	351	8,775 00	390	9,750 00
Home consumption in district No. 1, not included above.....		82,936 00		80,000 00
Total.....		3,203,922 00		3,746,121 40
Increase in 1893.....				542,199 40

COMPARATIVE STATEMENT of Production in each Branch of Fisheries, &c.—Continued.
 PROVINCE OF PRINCE EDWARD ISLAND.

Kinds of Fish.	1892.		1893.	
	Quantity.	Value.	Quantity.	Value.
		\$ cts.		\$ cts.
Salmon, fresh..... Lbs.	11,980	1,098 00	2,970	594 00
Herring, salted..... Brls.	20,902	94,059 00	40,949	184,270 50
do fresh..... Lbs.			12,500	125 00
do smoked..... "			6,000	120 00
Mackerel, salted..... Brls.	21,901	306,614 00	14,280	199,920 00
do canned..... Lbs.	7,521	902 40	38,100	4,572 00
Lobsters, canned..... "	2,819,572	394,740 08	3,168,674	443,614 36
Cod, dried..... Cwt.	19,402	87,309 00	21,062	94,779 00
Tongues and sounds..... Brls.			2	20 00
Hake, dried..... Cwt.	23,546	70,638 00	8,044	24,182 00
do sounds..... Lbs.	6,656	3,328 00	6,915	3,457 50
Haddock..... Cwt.	8,621	30,173 50	868	3,038 00
Trout..... Lbs.	34,450	3,445 00	35,970	3,597 00
Halibut..... "	2,300	230 00	5,400	540 00
Smelts..... "	196,900	9,845 00	496,390	24,819 50
Alewives..... Brls.	537	2,416 50	569	2,560 50
Oysters..... "	32,937	98,811 00	29,627	88,881 00
Clams..... "			425	2,550 00
Eels..... "	894	8,940 00	700	7,000 00
Flounders..... Lbs.			100	5 00
Tom cods..... "			1,670	83 50
Mixed and coarse fish..... Brls.			938	1,876 00
Fish oil..... Galls.	11,403	4,561 20	10,096	4,038 40
Seal skins..... No.			10	10 00
Fish used as bait..... Brls.	27,664	41,496 00	20,435	30,652 50
do do manure..... "	21,250	21,250 00	125	62 50
do guano..... Tons.			805	8,050 00
Total.....		1,179,856 68		1,133,368 26
Decrease in 1893.....				46,488 42

COMPARATIVE STATEMENT of Production in each Branch of Fisheries, &c.—Continued.
PROVINCE OF QUEBEC.

Kinds of Fish.		1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
			\$ cts.		\$ cts.
Salmon, salted.....	Brls.	396	6,336 00	741	11,856 00
do fresh.....	Lbs.	679,094	135,818 80	611,518	122,303 60
do in cans.....	"			16,500	2,475 00
Herring, salted.....	Brls.	25,061	112,774 50	29,051	130,729 50
do fresh.....	Lbs.			90,400	904 00
do smoked.....	"	35,375	353 75	41,400	828 00
Mackerel, salted.....	Brls.	4,817	67,438 00	8,215	115,010 00
do fresh.....	Lbs.			7,100	852 00
Lobsters, canned.....	"	1,127,934	157,910 76	1,197,134	167,598 76
do fresh.....	Tons.			2	80 00
Cod.....	Cwt.	245,209	1,103,276 50	247,622	1,108,161 00
do tongues and sounds.....	Brls.	124	1,240 00	253	2,530 00
Hake, salted.....	Cwt.			150	450 00
Haddock, salted.....	"	1,108	3,873 00	2,922	10,227 00
Halibut.....	Lbs.	124,945	12,494 50	161,115	16,111 50
Whitefish.....	"	143,262	11,460 96	155,360	12,428 80
Trout.....	"	422,250	40,885 00	407,070	40,707 00
Shad.....	"	119,374	7,162 44	109,610	6,576 60
Smelts.....	"	112,608	5,630 40	231,524	11,576 20
Clams.....	Brls.			1,408	7,040 00
Eels.....	Lbs.	830,705	49,688 30	844,530	50,405 80
Sturgeon.....	"	213,342	12,300 40	208,450	12,507 00
Sardines.....	Brls.	4,322	12,966 00	4,760	14,280 00
Maskinongé.....	Lbs.	52,450	3,147 00	52,500	3,150 00
Bass.....	"	97,130	5,827 80	104,525	6,271 50
Pickrel.....	"	201,175	10,058 75	240,478	12,023 90
Pike.....	"	213,645	10,682 25	205,730	10,286 50
Winninish.....	"	100,000	6,000 00	100,000	6,000 00
Tom cod.....	"	60,000	7,500 00	173,163	5,158 15
Coarse and mixed fish.....	Brls.	14,286	58,137 00	14,293	42,880 80
Seal skins.....	No.	18,971	23,713 75	21,038	26,297 50
Porpoise skins.....	"	316	1,318 00	251	1,004 00
Fish oil.....	Galls.	259,648	103,859 20	252,029	100,811 60
do for bait.....	Brls.	92,711	139,066 50	74,472	111,708 00
do for manure.....	"	73,197	36,599 50	95,351	47,675 50
Fish used as local consumption.....	"	22,176	88,708 00		
Total.....			2,236,732 06		2,218,905 21
Decrease in 1893.....					17,826 85

COMPARATIVE STATEMENT of Production in each Branch of Fisheries, &c.—Continued.
PROVINCE OF BRITISH COLUMBIA.

Kinds of Fish.		1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
			\$ cts.		\$ cts.
Salmon, preserved in cans.	Lbs.	11,488,592	1,378,631 04	29,169,903	2,916,990 80
do fresh	"	2,935,509	293,550 90	3,594,200	179,710 00
do smoked	"	135,500	27,100 00	143,240	8,594 40
do salted	Brls.	2,348	28,176 00	5,688	45,504 00
Herring, fresh	Lbs.	489,000	23,652 50	458,000	22,900 00
do smoked	"	21,000	2,520 00	8,700	870 00
do salted	Brls.	"	"	250	1,500 00
Sturgeon	"	520,500	26,025 00	330,000	16,500 00
Halibut	Lbs.	1,357,500	67,875 00	1,373,900	68,695 00
Oulachons, pickled	Brls.	875	7,000 00	948	7,584 00
do smoked	Lbs.	21,800	3,270 00	17,500	1,050 00
do fresh	"	175,500	8,775 00	186,000	9,300 00
Trout	"	68,050	6,805 00	56,400	5,640 00
Smelts	"	156,600	7,830 00	80,000	4,000 00
Skill, salted	Brls.	95	1,140 00	77	616 00
Codfish, fresh (rock).	Lbs.	173,500	8,675 00	462,000	27,720 00
Oysters	Bush.	2,000	4,000 00	4,000	8,000 00
Mussels	"	600	525 00	600	480 00
Clams	"	11,000	9,625 00	12,500	10,625 00
Crabs	No.	600,000	30,000 00	600,000	18,000 00
Tooshqua	Lbs.	416,300	20,815 00	"	"
Fur-seal skins	No.	46,362	602,706 00	70,332	843,984 00
Hair do	"	6,700	6,700 00	4,150	3,112 50
Sea-otter skins	"	14	2,100 00	15	1,875 00
Assorted or mixed fish	Lbs.	430,320	31,516 00	304,750	15,237 50
Shrimps and prawns	"	"	5,000 00	"	5,000 00
Fish oil	Galls.	259,554	120,046 20	172,250	68,900 00
Fish products	"	"	1,050 00	"	1,200 00
Fish for home consumption, Chinese labour- ers, not included above	"	"	125,000 00	"	150,000 00
Guano made from offal	Tons.	15	375 00	15	375 00
Total			2,849,483 64		4,443,963 20
Increase in 1893.					1,594,479 56

COMPARATIVE STATEMENT of Production in each branch of Fisheries, &c.—*Concluded*.
PROVINCE OF ONTARIO.

Kinds of Fish.		1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
			\$ cts.		\$ cts.
Whitefish.....	Brls.	1,030	10,300 00	630	6,300 00
do	Lbs.	7,637,396	610,991 68	5,667,010	453,360 80
Salmon trout.....	Brls.	1,907	19,070 00	815	8,150 00
do	Lbs.	6,146,859	614,685 90	5,694,680	569,468 00
Herring.....	Brls.	3,546	15,957 00	2,940	13,230 00
do	Lbs.	8,918,240	356,729 60	7,994,604	239,838 12
Eels.....	"	76,050	4,563 00	96,620	5,797 20
Sturgeon	"	767,187	46,031 10	1,237,577	74,254 62
Maskinongé.....	"	488,800	29,328 00	452,995	27,179 70
Bass	"	636,190	38,171 40	734,481	44,068 86
Pickarel.....	"	2,973,422	148,671 10	2,109,555	105,477 75
Pike.....	"	806,436	40,321 80	958,815	47,940 75
Coarse fish	"	3,579,265	107,377 95	2,911,690	87,350 70
Fish for home consumption.....	"			417,140	12,514 20
Total			2,042,198 53		1,694,930 70
Decrease in 1893.....					347,267 83

MANITOBA AND NORTH-WEST TERRITORIES.

Whitefish.....	Lbs.	15,789,105	865,670 78	15,441,919	826,654 50
Pickarel.....	"	600,593	23,943 72	1,366,971	33,343 00
Pike	"	8,662,489	173,249 78	7,573,060	151,461 00
Sturgeon.....	"	127,410	5,684 10	84,450	2,533 50
Tullibee.....	"	171,800	3,536 00	68,600	2,058 00
Mixed and coarse fish.....	"	1,617,000	16,170 00	1,240,800	12,408 00
Home consumption, not included above.....	"			1,363,515	13,635 00
Total			1,088,254 38		1,042,093 00
Decrease in 1893.....					46,161 38

RECAPITULATION

Showing the Number, Tonnage and Value of Fishing Vessels and Boats, and all other Fishing Material, as well as the Number of Fishermen in the Dominion of Canada, 1893.

PROVINCE.	FISHERMEN.		VESSELS.			BOATS.		GILL NETS AND SEINES.		Value of Pound Nets, Trap Nets, Weirs, &c.	Value of Lobster Plant.	Approximate Value of Freezers, Ice and Smokehouses and other Fixtures not Itemized.	TOTAL VALUE.
	Vessels.	Boats.	Number.	Tonnage.	Value.	Number.	Value.	Fathoms.	Value.				
Nova Scotia.....	5,447	18,400	543	24,859	1,215,278	13,795	303,376	2,353,910	581,540	248,294	434,729	423,625	3,206,782
New Brunswick.....	827	10,478	226	3,382	83,795	5,978	202,282	528,817	325,688	197,630	344,866	334,774	1,489,035
Prince Edward Island..	235	3,287	39	1,357	33,350	1,237	46,458	80,936	38,772	5,388	490,150	30,400	644,518
Quebec.....	387	11,178	59	2,093	50,550	6,504	178,782	256,083	163,407	82,937	74,090	96,470	746,236
Ontario.....	375	2,254	*76	1,734	197,650	1,012	92,046	1,738,721	254,721	119,525	.....	Not given.	663,942
British Columbia ..	†1,540	12,392	148	5,158	573,150	2,543	119,310	329,320	258,467	14,250	.....	945,300	1,910,477
Manitoba.....	88	865	*13	1,513	92,600	439	12,855	119,015	15,112	..	.....	Not given.	120,567
	8,899	58,854											
Totals.....	.....	67,753	1,104	40,096	2,246,373	31,508	955,109	5,406,802	1,637,707	667,964	1,343,835	1,880,569	8,781,557

* Mostly all fishing steam tugs.
† Including sealing fleet crews.

RECAPITULATION.

TABLE showing the Total Value of the Fisheries in the respective Provinces of Canada, from 1870 to 1893, inclusive, as compiled from the Annual Reports of the Department of Fisheries.

Years.	Nova Scotia.	New Brunswick.	Prince Edward Island.	Quebec.	Ontario.	British Columbia.	Manitoba and North-west Territories.	Total for Canada.
1870.	\$ 4,019,425	\$ 1,131,433	No data	\$ 1,161,551	\$ 264,982	No data	No data	\$ 6,577,391
1871.	5,101,030	1,135,033	do	1,093,612	193,524	do	do	7,573,199
1872.	6,016,835	1,965,459	do	1,320,189	267,633	do	do	9,570,116
1873.	6,577,087	2,285,602	207,595	1,391,564	293,031	do	do	10,754,997
1874.	6,652,302	2,685,794	288,863	1,698,660	446,267	do	do	11,681,886
1875.	5,373,851	2,427,654	298,927	1,596,759	453,194	do	do	10,350,385
1876.	6,029,050	1,933,389	493,967	2,097,668	437,229	do	do	11,117,000
1877.	5,527,858	2,133,237	763,036	2,560,147	438,223	583,483	do	12,005,394
1878.	6,131,600	2,305,790	840,344	2,664,055	348,122	925,767	do	13,295,678
1879.	5,752,937	2,564,722	1,402,301	2,820,395	367,133	713,335	do	13,529,254
1880.	6,291,061	2,744,447	1,675,089	2,631,556	444,491	1,454,321	do	14,499,979
1881.	6,214,782	2,930,904	1,955,290	2,751,962	509,903	1,842,675	do	15,817,162
1882.	7,131,418	3,192,339	1,855,687	1,976,516	825,457	1,644,646	do	16,824,092
1883.	7,689,374	3,185,674	1,272,468	2,138,997	1,027,033	1,358,267	do	16,958,192
1884.	8,763,779	3,730,454	1,083,619	1,694,461	1,133,724	1,078,038	do	17,722,973
1885.	8,283,922	4,005,431	1,293,430	1,719,460	1,342,692	1,557,348	do	17,722,973
1886.	8,415,362	4,180,227	1,141,991	1,741,382	1,435,998	1,974,887	186,980	18,679,288
1887.	8,379,782	3,559,507	1,037,426	1,773,567	1,531,850	1,902,195	129,084	18,386,103
1888.	7,817,030	2,941,863	876,862	1,860,012	1,839,869	3,348,067	180,677	17,418,510
1889.	6,346,722	3,067,029	886,430	1,876,194	1,963,123	3,481,432	167,679	17,655,256
1890.	6,636,444	2,693,055	1,041,109	1,615,119	2,009,037	3,008,755	232,104	17,714,902
1891.	7,011,300	3,571,050	1,238,733	2,008,678	1,806,389	2,849,483	332,969	18,977,878
1892.	6,340,724	3,203,922	1,179,856	2,236,732	2,042,198	4,443,963	1,088,254	18,941,171
1893.	6,407,675	3,746,121	1,133,368	2,218,905	1,694,930		1,042,093	20,686,661
Totals.	159,110,954	67,386,206	21,969,391	46,458,241	23,116,692	32,923,075	3,359,840	354,420,319

COMPARATIVE TABLE showing Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries of Canada, together with the Value of Fishing Materials employed, from 1879 to 1893.

YEARS.	VESSELS.			BOATS.		Value of Nets and Seines.	Value of other Fishing Material.	Total of Capital Invested.
	No.	Tonnage.	Value.	No.	Value.			
			\$		\$	\$	\$	\$
1879.....	1,183	43,873	1,714,917	25,616	854,289	988,698	456,617	4,014,521
1880.....	1,181	45,323	1,814,688	25,266	716,352	985,973	419,564	3,936,582
1881.....	1,120	48,389	1,765,870	26,108	696,710	970,617	679,852	4,113,049
1882.....	1,140	42,845	1,749,717	26,477	833,137	1,351,193	823,938	4,757,985
1883.....	1,198	48,106	2,023,045	25,825	783,186	1,243,366	1,070,930	5,120,527
1884.....	1,182	42,747	1,866,711	24,287	741,727	1,191,579	1,224,646	5,014,663
1885.....	1,177	48,728	2,021,633	28,472	852,257	1,219,284	2,604,285	6,697,459
1886.....	1,113	44,605	1,980,411	28,187	850,545	1,263,152	2,720,187	6,814,295
1887.....	1,168	44,845	1,989,840	28,092	875,316	1,499,328	2,384,356	6,748,840
1888.....	1,137	43,247	2,017,558	27,384	859,953	1,594,992	2,390,502	6,863,005
1889.....	1,100	44,936	2,064,918	29,555	965,010	1,591,085	2,149,138	6,770,151
1890.....	1,069	43,084	2,152,790	29,803	924,346	1,695,358	2,600,147	7,372,641
1891.....	1,027	39,377	2,125,355	30,438	1,007,815	1,644,892	2,598,124	7,376,186
1892.....	988	37,205	2,112,875	30,513	1,041,972	1,475,043	3,017,945	7,647,835
1893.....	1,104	40,096	2,246,373	31,508	955,109	1,637,707	3,174,404	8,681,557

COMPARATIVE TABLE showing the Number of Men employed in the Fishing Industry in Vessels and Boats from the Year 1879 to 1893.

Years.	Number of Men in Vessels.	Number of Men in Boats.	Total Number of Fishermen.
1879	8,818	52,577	61,395
1880	8,757	51,900	60,657
1881	8,359	50,679	59,056
1882	8,498	52,785	61,283
1883	9,966	52,259	62,225
1884	9,968	51,854	61,822
1885	9,539	53,282	62,821
1886	8,927	53,073	62,000
1887	8,911	55,247	64,158
1888	9,574	53,109	62,683
1889	9,621	55,382	65,003
1890	8,726	55,000	63,726
1891	8,666	56,909	65,575
1892	8,330	55,348	63,678
1893	8,899	58,851	67,753

CONCLUSION.

It will be seen from the foregoing pages that steps are being taken to protect the fisheries of Canada and to prevent, where possible, any depletion of its waters. The great interests at stake are constantly kept in view by the department, whilst at the same time all is being done that can be to encourage and foster a desire in fishermen and others engaged in the industry of fishing to assist in properly maintaining regulations that will preserve our great heritage.

I have the honour to be, sir,
Your obedient servant,

WM. SMITH,
Deputy Minister of Marine and Fisheries.

SPECIAL APPENDED REPORTS.

No. I.—ON THE USE OF SEINES IN INLAND WATERS.

BY PROFESSOR PRINCE, COMMISSIONER OF FISHERIES.

Among many measures that have been taken for the preservation of the fish wealth of our inland lakes and rivers, the establishment of close seasons, affording protection to breeding fish, the liberal stocking of waters with fry from the Government hatcheries, and the regulation of modes of fishing by mesh restrictions and the like, have proved of direct and substantial benefit. Without such regulations our vast fresh water fisheries would already have been wholly depleted. Canadian fishermen on the lakes readily recognize the value and utility of the fishery laws of the Dominion, and an eminent United States authority* testified not long ago to "the greater prolificness of the Canadian waters at the present time in whitefish and trout" when comparing the north and south shores of Lake Ontario.

It cannot be denied that measures still remain to be taken to further aid in the recuperation of our fisheries. While protecting full grown fish when about to spawn it is forgotten that protection, too, is necessary for the fry, when newly hatched and during the first months of their existence. The destruction of very young and immature fish which were of little or no value to the fishermen, is a source of danger.

The fact needs no demonstration that our fisheries really ultimately depend upon the welfare and abundance of young fish. Anything detrimental to them in their early and defenceless stages affects injuriously the fisheries as a whole. If the young be injured or destroyed the supply of adult fish in the future will diminish or cease. Artificial fish-culture, moreover, being carried on upon an extensive scale and vast quantities of young fry deposited annually, these cannot adequately benefit the fisheries if the liberated schools are disturbed or devastated. Scientific observation has shown that the minute and defenceless fry of the greater number of valuable fishes, freshwater and marine, resort to comparatively shallow water during the first months of their existence. The surface of the sea in certain areas has been found to be alive with swarms of delicate young fish, and the shallow waters in our lakes and rivers are the favourite haunt of multitudes of young. This is so for many reasons. The light and warmth necessary for rapid growth are furnished there. At greater depths the water is cold and comparatively dark. Further, safety from the attacks of larger fish is better secured than in deeper water. Some fish are found to prefer shingly beaches, where pebbles abound, affording crevices for shelter when danger is near; others choose a smooth sandy bottom, especially in sheltered bays and creeks, over which they roam in search for minute food, chiefly infusorians, minute crustaceans, molluscs, &c. The schools of diminutive fish in such regions are of the most varied character including worthless as well as valuable species. A fine-meshed naturalist's seine, used in Lake Erie, captured in one haul, very small bass, lake herring, pike-perch or pickerel, and various kinds of suckers and shiners. At certain seasons the shores swarm with small lake herring in the post-larval stage, somewhat larger and more active than the delicate and helpless larval stage. Fishery Overseer Boismier (Detroit River Division) refers* to the abundance of young fish in the shallows of Detroit River and Lake St. Clair. "It is stated," he says, "that million of young fish are destroyed by parties seining for minnows in shallow bays." It is also said that

*Dr. Hugh M. Smith, Bull. U. S. Fish Commission, 1890 p. 185.

*Report of the Department 1890, App. G., p. 194.

spawn is at times dragged ashore by the seine; but such masses of spawn are probably dislodged by storms, and as a rule the seine will not interfere with spawn, unless in localities chosen by the various kinds of bass.

It is precisely such shallows as those here referred to, with beaches of sand or pebble, in which seining is carried on. The net is, as it were, thrown around the fish within a short distance of shore, and is pulled to land. Before being hauled in both ends are secured on shore, and the net forms a complete inclosure, capturing everything within its sweep and extending in some cases as much as 1,000 feet, with 12 feet depth in the middle, though the dimensions are often less than these. Captures in the seine are of a very varied nature, and as the meshes are loose, and not usually fully open, as in a fixed net, like a pound, many fish are entangled which are of no value for market purposes. Young fish, included in this mixed catch, are mostly injured, and may be thrown ashore as useless. Further, the constant use of seines, sweeping over the shallows, has a very unfavourable effect on the shoals of small fish. They are disturbed in their migratory movements and driven into deeper water, where they are exposed to the attacks of larger fish. Indirectly, as well as directly, the schools of fry are injuriously affected. Professor Ramsay Wright has referred* to the capture of immature whitefish by herring seine nets, and pointed out that the surplus fish are used as manure when the market is glutted. Similarly, Dr. H. M. Smith,† in his report already referred to, speaks of ground where whitefish formerly spawned in considerable numbers and, where the young now appear to congregate at times, on which quantities are taken for bait, measuring $1\frac{1}{2}$ to 3 inches long. The fishermen when using the seine can hardly know the extent of injury they inflict; for when very young, our valuable good fishes are transparent, minute, and almost invisible in the meshes of the net.

That valuable fry are thus disturbed, injured and destroyed, there can be no doubt. It is impossible to avoid this where seining is carried on. But the destruction of the young of inferior species, usually regarded as worthless, is most harmful. These small fishes, or minnows, are the favourite food of pike-perch or pickerel, salmon-trout and other predaceous fish. The abundance of these more valuable kinds depends largely on the abundance of smaller varieties on which they largely live. The term minnow applied to these small fishes is used indiscriminately and embraces nearly twenty species, including some of the more valuable food fishes.

As compared with the fixed pound net, inshore, through the meshes of which the very small fry mentioned readily pass without injury, or again, with the gill-net hanging with fully extended meshes in deeper water, the seine is by far the most injurious from the point of view here considered.

NO. II.—A MARINE SCIENTIFIC STATION FOR CANADA.

BY PROFESSOR PRINCE, COMMISSIONER OF FISHERIES.

At the request of the Minister of Marine and Fisheries the following report has been prepared embodying certain suggestions touching the foundation of a Marine Laboratory for the Dominion.

There is a growing feeling prevailing that our country, which in so many respects has taken a leading place among the nations in regard to fishery matters, especially in the administration of judicious fishery laws and regulations, and the accomplishment on an extensive scale of practical fishery objects such as artificial fish culture, should take a position of equality with other countries in the furtherance of marine and fresh water biological research. Proposals, indeed, have from time to time been made in this direction, and professors in our universities, as well as practical fishery authorities, have given strong expression to views in favor of a biological station for Canada, on the lines of such institutions in other countries. A period has now been

*Rep. Ont. Game and Fish Comm., 1892, p. 469.

†Bull. U.S. Fish Comm., 1890, p. 210.

reached, it may be justly claimed, when such a suggested scheme should assume practical shape.

Possessed, as the Dominion is, of perhaps the richest and most varied fisheries in the world, the exemplar to other countries in her elaborate system of fish propagation for the replenishment of the great lakes and rivers, and a pioneer in the hatching of that valuable crustacean, the lobster, it is not surprising that the necessity is now perceived for an institution devoted to the accurate investigation of fishery problems, the elucidation and final settlement of perplexing questions which have baffled practical men, the collection of exact observations on the food, habits, and life-history of fishes, and the accumulation in this way of useful scientific knowledge in order to promote the prosperity of our coast and inland fisheries.

There are few civilized countries which have not already established such institutions. That their value is appreciated is clear from the policy of Germany, which, notwithstanding her limited coast line, has several marine laboratories, and no sooner became possessed of Heligoland, so long a British possession, than a marine station was founded there by the German Government and equipped with all the appliances for aiding the fisheries of that empire.

Directly or indirectly under the auspices of the British Government, about half a dozen marine stations carry on valuable work on different parts of the English and Scotch coasts, at Plymouth, St. Andrews, Dunbar, Grimsby, Millport, and other places, while the splendidly equipped laboratories of the United States, France, Italy, Holland, New Zealand, Australia, and other lands are famous. These have made valuable contributions to our knowledge of fish and fisheries in various parts of the world. Why should the Dominion be unable to do her part in this great work? Is it because Canada offers less field, or has fewer difficult problems to solve in connection with her fisheries? On the contrary, it is no exaggeration to say that the work done in other countries could be far surpassed by Canada, and that our waters offer unparalleled opportunities for scientific research, with the certainty of abundant and valuable results. Prolific as our fisheries are, the infinitely varied character of our maritime resources has yet to be fully understood and developed, while legislation in regard to the fisheries would be no longer hampered by difficulties and drawbacks, were a body of scientifically ascertained knowledge available.

Sir William Dawson, Mr. J. F. Whiteaves, and their colleagues, by their investigations in the Gulf of St. Lawrence, and Professor Ganong and others by researches in New Brunswick waters, have shown what a promising field for investigation exists. But the fact that year after year professors and bands of students from the United States resort to Canadian shores to carry on marine studies, preferring our prolific waters to their own, clearly proves, if proof were needed, that a Marine Station in Canada would be able to accomplish great results.

The late Professor Moseley, of Oxford, naturalist on the famous "Challenger" expedition, once declared his conviction that no fisheries could be carried on with adequate success and regulated with security unless a scientific knowledge of their conditions and character had been obtained by the researches of scientific observers. "I do not think," he declared, in London, March 31st, 1884, "that any investigation not of a strictly scientific character is of much value with regard to practical results. It is only by the most thorough scientific work that we shall ever arrive at the increasing, for example, of our supplies of oysters and lobsters." Professor Moseley had almost unequalled opportunities, during the cruise of *U. S. S. Challenger*, for gaining an insight into the life of the sea in the most diverse regions of the globe, and it was clear to him that for the safety of the fishing industries themselves, and for the prosperity of those engaged in them, a thoroughly accurate knowledge of the conditions of life in the waters, the growth, spawning periods, and migrations of the more valuable fishes was of paramount importance. If it be the duty of Government to protect and foster the fisheries in all legitimate ways, it is equally the duty of Government to investigate the causes which render such protection necessary, and to establish sure and unquestionable grounds for action.

An opinion has prevailed to a lamentable extent that fishery questions are all purely practical, and the less that science interferes the better. But no greater error is possible. Year after year perplexing problems and difficulties have arisen in connection with the fisheries, and in order to get at the facts and causes involved, commissions of inquiry have been instituted. Such commissions have collected the views of various parties, and, on the opinions obtained, have often taken action. But opinions vary. There is hardly any unanimity, amongst those chiefly interested, upon any fishery question, and the views expressed are often so opposed to each other, that efficient action in the way of legislation has not been possible. Protective laws, regulations as to close seasons, restrictions as to traps, nets and methods of fishing, can never be satisfactorily framed if based merely upon opinions and the varied views of those interested. Men engaged in chemical industries, in engineering, farming, &c., have sought the help of science and received practical aid of the utmost value. Why should the fisheries not receive similar aid from science, and make progress under the reliable guidance of accurately ascertained knowledge? The migrations of fishes, the fluctuations observed in their abundance from season to season, their reduced numbers, or in some cases, total disappearance in certain areas, and their unexpected appearance or increased abundance in other waters, are at present largely matters of conjecture. But such movements, and such decrease or increase in the quantity of fish depend upon causes which can be discovered, and their discovery would place in the hands of fishermen the power to carry on their work to the best advantage and not by mere chance or luck. Observations on the abundance and nature of the food on the floor of the sea would no doubt be a certain guide to the movements of fishes, while changes of temperature at the sea bottom, and other conditions are of great importance. Professor McIntosh, a leading European fishery authority, has shown from laborious investigations conducted at St. Andrew's Marine Laboratory, Scotland, that with the progress of the year there is a regular sequence in the kinds of animals which people the waters of the sea in certain areas. These animals afford food for the fishes, young and adult, and that the abundance and character of the food directly affects the numbers and kind of fish frequenting certain waters needs no demonstration. Each month, indeed, seems to be characterized by the appearance of special forms of marine life. This fruitful field of investigation has never yet been entered upon in the waters of the Dominion. The first steps have yet to be taken in this and a host of other lines of study. The foundation of a marine station upon the coast would render possible the prosecution of such necessary researches. The individual efforts of naturalists can never lead to the rapid accumulation of facts necessary to a science of the Canadian fisheries. Only a properly equipped marine station can accomplish fruitful results. It would form a centre of operations whence systematic work could be carried on; where by appropriate appliances and instruments, with the skilled aid of officials, the results could be put into shape for the service of the public. Legislation has done much in regard to the fisheries, but it has often proceeded somewhat hazardingly and without a trustworthy basis of knowledge. Hence conflicting regulations, alterations and amendments have too frequently followed. Special forms of fishing apparatus have been encouraged, others discouraged or prohibited, while the meshes of the various nets have been altered, according to law, at different times. Such legislation may have worked harshly in many instances, though on the whole it has been admittedly beneficial, yet no adequate experiments have ever been carried on with the object of demonstrating for instance the actual effect of mesh regulations. On the one hand, it has been argued that the size of mesh has little effect upon the capture of particular sizes of fish, in the case of certain species; while on the other hand the opposite view has been just as strongly urged. It is patent that such disputed questions could readily be settled by experiments carried on at a scientific station and an unquestionable basis of proved facts provided for future legislative action. Scientific investigations carried on by competent experimenters, would decide once and for all these debatable matters. The comparative efficiency, destructiveness, and wastefulness of various methods of fishing, could be ascertained in the same way. Other work

would fall within the scope of a marine station, all having a most direct bearing upon the practical and mercantile aspects of the fishing industries. The investigation of the resources of the various areas along the lengthy coast of the Dominion, the thorough examination of extensive regions of the sea bottom and the determination of fishes and special products, peculiar to these various regions, are calculated to place in the fisherman's hands precisely the information which will be most valuable to him. Such knowledge directs him to new and unsuspected grounds, saves him from fruitless trials of unproductive areas, and may even bring before him valuable fishes of whose value and abundance he was not aware. The deterioration of areas once productive, the partial or total disappearance of certain fish, these and other problems can only be solved by the accurate and systematic work carried on from some central station on the coast. The results of such investigation show the causes of deterioration and may lead in some cases to practical methods of restoration to former productiveness. The introduction of new species of great market value and the creation of new industries is one of the readiest and most apparent ways in which science is able to benefit the fisheries. The nature of the food, the conditions of breeding and embryonic life, the presence or absence of enemies and hurtful influences, in short, all the conditions influencing the welfare, growth, and increase of such transferred or newly introduced species, are matters for scientific investigation, preliminary to practical steps. The introduction of the European sole (*solea vulgaris*) is one of the first experiments which would suggest itself, after the preliminary investigations had been completed. A trial has been made in the United States, but the results have not proved very satisfactory. No doubt many sandy areas, on our own coast, are well adapted for the experiment, and the English sole is now one of the most valuable of food fishes. The London market is being supplied from Norwegian and more distant waters, so inadequate is the supply obtainable in British waters. It is a species, like all the *Pleuronectidæ*, extremely tenacious of life, and its value in the English markets is so high that the introduction of such a fish, if successful, would prove a source of wealth to the fishing population on our coasts. Soles could no doubt be conveyed alive to the London markets, for the voyage is little longer than that of the Norwegian boats, which at present carry on a highly remunerative British trade in this delicious and esteemed fish. But the experimental introduction of new fishes, ranking high in economic importance, is secondary to the full development of the fishing resources of our waters as they at present exist. There is every probability that the thorough and systematic investigation of the fauna of our Atlantic coast, carried on from such a Marine station as Canada ought to possess, would lead to the discovery of fishes of economic value at present existing in our waters though unrecognized and unappreciated. The anchovy has been recorded, though probably determined on insufficient grounds, on the Pacific coast of the Dominion. It is highly probable therefore that this fish occurs in our Atlantic waters, and it is one of the most delicate and highly esteemed of our fishes. If so, a new and valuable industry would be readily opened up, just as in the smelt fishing recently developed in certain rivers in the Maritime Provinces. The value of the smelt was not appreciated until within the last few years and in such a river as the Miramichi the smelt fishery has risen to the position of a highly remunerative industry. From investigations pursued at the Plymouth Marine Laboratory it has been shown that on the south coast of England anchovies are plentifully captured in sprat and pilchard nets, and it has been pointed out by scientific workers at that laboratory that a regular fishery could be established. On the coasts of Holland, France, Spain and Italy, such an anchovy fishery has long been carried on with profit to the fishermen. The anchovy migrates and schools much after the fashion of the mackerel, and they are netted in a similar way, when coming into the shallow waters. Whether fishes of economic value such as the anchovy, the pilchard, the sprat &c., really inhabit our waters or not, cannot be decided in our present state of knowledge. At certain seasons vast schools of small fish, roughly classed as "Britt" or regarded as "Tinkers," invade particular portions of our littoral waters, and a thorough study of these smaller forms must yield important knowledge and throw light upon the productive-

ness and range of our fish supply. Recent fishery investigations have more and more clearly demonstrated that a knowledge of small fishes, whether small species i.e., distinct kinds, or merely the young of larger and familiar forms is of supreme value. And it is precisely of these smaller and often despised fishes that exact knowledge is most lacking. It is possible in a great degree to foretell the probable abundance or scarcity of fish in future seasons, from observations on the schools of young fish which make their appearance in certain areas. At present it is a matter of little interest to those whose living depends upon the prosperity of the fisheries, what the precise nature of these young fish may be, and their presence in the coastal waters has not been regarded as of much importance from a practical point of view. But it is not so. The studies of the scientific observer have fixed the fallacy of this common opinion, and have established, beyond doubt, that these schools of fry directly and indirectly indicate a good or bad fishing season. Directly they do this because when these schools are carefully examined by competent authorities they often prove to be the fry of fish most valued as food, or again if not themselves the young of such fishes, they form a favourite food of esteemed kinds. In the warm summer months vast schools of minute fishes—one or two inches in length, occur off the Bay of Chaleur and further north. The local fishermen regard them as young mackerel, others as herring, others as cod and hake. As a matter of fact these important schools of small fry have never been studied by any observer, and of what kind of fish they really consist has never been decided. More than this the work carried on in other countries has shown that we can never understand the fisheries, the conditions of their prosperity or decadence without a knowledge of the eggs and spawning grounds. Almost nothing is known of this great subject so far as Canadian waters are concerned. Nor can such studies be successfully carried on until a properly equipped basis of operations has been provided in a marine station where such work could be prosecuted. On the foundation of such a station these important problems would be attacked at once and much desired knowledge obtained.

Not only is a knowledge of the distribution and comparative abundance of the economic fishes in our waters needed, but the general conditions and the probabilities of success in stocking new waters, or it may be re-stocking depleted waters, require to be studied. The discovery of unnoticed or unknown species and the introduction of new and valued kinds are not only possible, but under scientific guidance may be matters of certainty. The capture of a new and valuable food fish, the tile fish, off the New England coast, in 1880, shows that useful kinds of fish may remain still to be discovered and that the treasures of our waters have not yet been fully made known by the operations of fishermen. Further, the extirpation of predatory kinds which destroy nets, food-fishes, and are a terror to the fisherman, would be a matter of study.*

A complete biological survey of the coastal waters of the Dominion is a great task, and could only be accomplished gradually. But such a work would fall within the operations of a marine station, and would be gradually pushed forward season by season until the physical conditions, the biological characteristics, the fauna and flora of every area, wherein the fishing industry is prosecuted, are made known and are available for the guidance and information of those actively engaged in fishery pursuits. Other work of a highly practical nature would come within the scope of the proposed institution.

Methods of preserving and transporting fish, improved means of drying, salting, canning, and refrigeration—in short, all the modes suggested by science for conserving the best and most attractive elements of fish food, would be thoroughly tested, and new improvements, or novel and unsuspected methods made known. The growth within the recent years of a vast industry which has proved a source of wealth to many districts, viz., the preservation of orchard fruits, is an indication of the success which may attend new methods of “putting up” economic products, and the preserving of fish in attractive marketable form is a line of industry in which very little progress has hitherto been made. The utilization of fish roe, livers, skins, and waste

* In 1892 myriads of voracious dogfish (*Acanthias*) appeared in the Bay of Fundy in the month of February.

products, at present of comparatively small value, is a promising field there can be no doubt, if economical and ready methods be discovered of turning them to account. It remains to be seen how far existing modes can be improved, or new methods adopted, with a prospect of commercial success.

The preservation of fish on new plans is a most promising field, and one which could be without difficulty carried on experimentally in a marine station. No one acquainted with the incredibly rapid progress of the preserved fruit industry already referred to, the great strides which it has made in the Dominion, and on somewhat different lines in Great Britain, can deny that such methods, if applied to the preservation of fish, would mark a new era into the fisheries of our country. While the neatly packed products of the orchard and fruit garden find their way to the tables of all classes of the community in Britain, the United States, and other countries, and the canned lobsters and oysters prepared on our coasts are hardly less widely used, the roughly dried and salted fish of the Dominion are far less generally sought and used in our provincial cities and towns, and are unknown to a great part of the population in Britain. In appearance and comestible qualities, salt fish, dry and pickled, have not appeared to recommend themselves to English cooks and housekeepers. Yet the quality of our cod, haddock, mackerel and herring cannot be questioned—indeed it may be doubted whether the fish of any other waters are of equal excellence. Experiments leading to a superior and more attractive method of preparing and packing these fish would yield pecuniary returns more than proportionate to any extra trouble or expense in preparation. Such prepared fish would take possession of markets never yet reached by our fish merchants, and would prove much more lucrative than the coarsely prepared, and, to many, offensive, forms of cured fish, which at present are shipped to the South American, West Indian and other markets. Norway has made great advances in this direction and her attractively prepared fishery products, including many entirely novel foods, have already secured much favour in the British markets. The enterprise of Canadian merchants would not be lacking if experiments proved that new and superior methods of preserving fish could be readily applied in our own fisheries.

Science alone can afford sure ground for advance in the various lines of progress indicated in the foregoing remarks. The fisheries have largely stood aloof from scientific aid, or rather the means of scientific aid have been wanting, and its powerful influence in the way of prospering the fisheries has not been realized. But the benefits of fishery science are no longer matters of doubt, and all that is required is to afford means for pursuing exact scientific research, and for spreading amongst fishermen and others, actively engaged in the fisheries, the beneficial results of such researches and new knowledge.

It is important that a scientific fishery station should be centrally situated upon the coast, that the conditions of marine life should be favourable, so that materials for study would be at hand and obtained without difficulty or loss of time. Again, it should be within easy reach of areas in which important fisheries are carried on, that is to say, the fisheries in actual operation should be easy of access from such a station, in order that all the practical knowledge of the fishermen may be made available and suggestions or information conveyed from the scientific station to those engaged on the fishing grounds.

There are many points upon the Atlantic seaboard which might be recommended for such a marine station. The richness and varied character of the fauna in the more southerly shores of the Dominion cannot be lost sight of. To Passamaquoddy Bay and the prolific waters around Grand Manan and the Western Isles, scientific workers from the United States have been accustomed to resort season after season, and very valuable and substantial contributions to our knowledge of the sea's resources have been made by Canadian investigators in this area.

A location further north presents, however, many advantages. The lobster fishery, with the various perplexing and difficult questions connected therewith, is carried on upon the greatest scale there, and with a marine station in close proximity, the life-history, habits, migrations and breeding of the valuable crustacean could

be thoroughly investigated. The mackerel fishery, however, is carried on at a most important period of the year in the more northerly waters, and the cod fishery, though not pursued to its fullest extent off Prince Edward Island, affords material for interesting and valuable investigations respecting the food, breeding, growth, and movements of the various members of the cod tribe, all of economic importance. Areas, with the most famous and prolific oyster beds extending over them, would be readily accessible from such a station; and the bays and inlets of the Quebec, and New Brunswick shores and north shore of Nova Scotia abound with smaller fishes, such as the smelt, capelin, etc., while the fry of various species occurring there require study in order to throw light upon the future development of the fishing industry. The fauna and flora may be less rich and varied than off the southern coast of New Brunswick; but that remains to be ascertained. Certainly points might be named in the northern area, bordering on the Gulf of St. Lawrence, which offer facilities most favourable for experiments on retaining young and immature lobsters in ponds until their defenceless stages are passed, and for repeating under strict scientific supervision, the work carried on with such apparent success in Norway by Captain Dannevig, whose achievements in rearing cod and other marine fishes to an advanced and robust stage are well known.

A marine station favourably situated and properly equipped has a great work before it in Canada. The lines along which that work would, without question, progress are infinitely varied, and no sketch, however full and comprehensive, can aim to do more than indicate their nature and direction. They all end in supremely practical results, and bear directly upon the welfare and prosperity of the great fishing industries. All who have been associated with fisheries in any way realize keenly the lack of accurate knowledge on the most vital and important points. Legislation has often been hazardous on account of this lack of ascertained fact and the existence of contradictory opinions. Primarily, a marine station would be a centre for investigation and research for the promotion and diffusion of knowledge. Without interfering with this first and most important work, such a station might be also a school for teaching and for scientific study. This latter line of work would enlist for it the sympathy and help in various ways of the universities, many professors and students from which might be expected to aid in the fishery investigation carried on. There is no field so fascinating and fruitful for the biologist as the sea, and distinguished zoologists and students would no doubt desire, as volunteer workers, to help in the investigations, viewing the fine opportunities for research as amply repaying them for their labour. In this way, directly and indirectly, fishery science would gain and the fisheries of the Dominion receive that light and knowledge which in various directions is greatly needed. No doubt pure scientific research, that is research with no direct practical end in view, must be carried on by private rather than public support, and the work of marine stations, like those in Scotland and elsewhere, must have sole regard to practical questions and utilitarian ends. In other countries the existence of marine stations has proved beneficial and has helped in wise and serviceable legislation without the risk of vexatious restrictions. They have shown in numberless instances that common opinion was wholly untrustworthy and that the evidence of those practically connected with the fishing industry was frequently far astray, and that commonly expressed views were the reverse of actual facts. Especially has this been the case with respect to the spawning and growth of marine food fishes. Government marine stations could no doubt rely for much aid upon certain of the cruisers engaged in the Fisheries Protection Service, but the main work of the station being of a delicate and precise nature must be carried on in the rooms of the laboratory. Apart from the work of collecting and making observations on the food, migrations and distribution of fishes, and the modes of capture, the more important results can be obtained only by laborious and prolonged work, with the aid of the instruments and books provided in the laboratory itself.

It is not too much to anticipate that the benefits resulting from the establishment of a marine station at some central point as indicated, would make obvious the necessity of others. The vast extent of coast and the varying character

of the littoral waters would imply such a development of this work. Certainly a more northern and a more southern marine station in the future would promote the great work of thorough investigation. The value and extent of the lake fisheries, in a similar way, would call for an inland station, in order that the conditions of life in these vast inland seas might be better understood. Certainly the practical benefits of a more trustworthy knowledge of our marine and fresh water fisheries can alone lead to their prosperity and growth in the future. Holland has established a floating marine station which can be moved season by season from one point of the coast to another, and with one permanent marine station as a central institution, such subsidiary stations, migratory or otherwise, might be found useful as secondary adjuncts in a work so extensive.

EDWARD E. PRINCE.

APPENDICES

APPENDIX No. 1.

SCHEDULE of Fishery Officers in the Dominion of Canada for the Year,
as revised to December, 1893.

PROVINCE OF ONTARIO.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Capt. E. Dunn.....	Fishery Officer...	Owen Sound.....	Having jurisdiction over Georgian Bay and the Great Lakes.
Capt. A. M. MacGregor.	do	Goderich.....	Sailing master of the SS. "Bayfield," having jurisdiction over the whole province of Ontario.
Donald F. Macdonell...	Overseer...	Port Arthur....	The waters of Lake Superior and its tributaries from Pigeon River to Cape Gargantua.
Thos. H. Elliott.....	do	Sault Ste. Marie..	From the head of Lake Superior to the easternmost mouth of French River, Algoma.
J. K. McDonald.....	do	Toronto.....	Lake Kagewong, Manitoulin Island.
John Jackson.....	do	Midland.....	That portion of the waters of Georgian Bay, extending from French River to Point Marks with counties opposite, including the mouths of Severn and Muskoka Rivers.
John Donaldson.....	do	Collingwood....	That portion of the waters of Georgian Bay, extending from Point Marks to Point Boucher, including Christian, Beckwith and other islands and the surrounding waters; also Nottawasaga River.
John Hoar.....	do	Lafontaine.....	About 18 miles of the waters of Georgian Bay, around Christian Island.
Robt. Edmonstone.....	do	Ballaclava.....	That portion of the waters of the Georgian Bay, extending from Allenwood to Colpoy's Bay.
Chas. Briggs	do	Paisley.....	About 70 miles of the waters of Lake Huron, from Cape Hurd to Southampton, besides the inland waters of the county of Bruce, south of division line between Amable and Albermarle, comprised within an area of about 800 square miles.
H. W. Ball.....	do	Goderich.....	About 60 miles of the waters of Lake Huron from Southampton to Goderich.
H. B. Quarry.....	do	Parkhill.....	About 65 miles of the waters of Lake Huron extending from Goderich to Blue Point.
J. C. Pollock.....	do	Forest.....	About 45 miles of the waters of Lake Huron and St. Clair River, extending from Blue Point, on Lake Huron, to Baby's Point on River St. Clair.
.....	do .....	.....	About 30 miles of the waters of Lake St. Clair, from Little Lake to its head.
Joseph Boismier.....	do	Sandwich.....	The waters of Lake St. Clair, from the division line between the townships of Dover West and Dover East to the mouth of Detroit River, and from thence to its outlet.
David Girardin.....	do	Point Pelee Island	About 50 miles of the waters of Lake Erie, around Point Pelee Island and adjacent islands.
Horace Bartlett.....	Warden ...	North Harbour Island.	About 20 miles of the waters of Lake Erie, around North Harbour and Middle Sister Islands.
Everitt Wigle.	Overseer...	Leamington.....	That portion of Lake Erie fronting on the county of Essex.
Hy. Linley.....	do	Cedar Springs....	About 50 miles of the waters of Lake Erie, fronting on the county of Kent.
Wm. Freeland.....	do	St. Thomas.....	About 110 miles of the waters of Lake Erie, fronting on the county of Elgin.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF ONTARIO—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
David Sharp.....	Overseer ...	Port Ryerse . . .	About 70 miles of the waters of Lake Erie, fronting on the counties of Norfolk and part of Haldimand as far as South Cayuga.
Chas. H. McCrae.....	do	Dunnville ...	About 10 miles of the waters of Lake Erie, from Cayuga to Moulton Bay and Grand River (30 miles), from mouth to Caledonia.
Charles W. Evans.....	do	Cayuga.....	The waters of Grand River, from the Division Line between North Cayuga and Canborough, on the east, to Caledonia, on the west.
Fred. Kerr.....	do	Hamilton	Having jurisdiction over all Ontario, but district proper comprises about 50 miles of the waters of Lake Ontario, from Brant House, Burlington Beach, to Niagara, including Niagara River.
Wm. Sargent.....	do	Bronte.....	About 20 miles of the waters of Lake Ontario, extending from Port Credit to Burlington Beach, at Brant House.
Wm. Helliwell.....	do	Highland Creek...	About 26 miles of the waters of Lake Ontario, fronting on the county of York.
Chas. Gilchrist.....	do	Port Hope.....	About 40 miles of the waters of Lake Ontario, fronting on the county of Northumberland; together with Rice Lake and tributaries, about 60 square miles of water.
Chas. Perry.....	do	Whitby.....	That portion of Lake Ontario, fronting on the county of Ontario South.
W. P. Clarke.....	do	Belleville.....	The whole Bay of Quinté, from Mill Point to head waters of said bay in the township of Murray.
Joseph Redmond, jun. ...	do	Picton.....	About 90 miles of the waters of Lake Ontario, fronting on the county of Prince Edward.
E. H. Sills.....	do	Napanee.....	About 35 miles of the waters of Lake Ontario, fronting on the counties of Lennox and Addington, and upper part of Amherst Island; also the inland waters of the counties of Lennox and Addington, comprised within an area of about 1,600 square miles.
R. R. Finkle.....	do	Bath.....	About 25 miles of the waters of Lake Ontario, fronting on the township of Earnestown in the counties of Lennox and Addington, and the lower part of Amherst Island.
A. H. Crosby.....	do	Belleville.....	That portion of the waters of the Bay of Quinté from Three Brothers' Island, near Kingston, to Trenton, at the head of the Bay.
Peter Kiel.....	do	Wolfe Island....	About 60 miles of the waters of Lake Ontario, around Wolfe, Simcoe, Horse-shoe and Pigeon Islands.
Wm. Ward.....	do	Toronto.....	The waters around Toronto Island including Toronto and Ashbridge Bays and River Don.
Thomas Merritt.....	do	Kingston... ..	About 20 miles of the waters of Lake Ontario fronting on the township of Storrington, Pittsburgh and Kingston, county Frontenac, including part of Bay of Quinté and River St. Lawrence.
John Cox.....	do	Howe Island.....	About 16 miles of the waters of Lake Ontario and River St. Lawrence, around Howe Island.
Nassau Acton.....	do	Gananoque.....	About 6 miles of the waters of the River St. Lawrence, from Wolfe Island to Jack Straw Lighthouse, together with the waters around Admiralty group of Islands; also Gananoque River, comprising 10 miles inland waters.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF ONTARIO—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
J. G. Wallace.....	Warden	Ivy Lea	About 10 miles of the waters of the River St. Lawrence, extending from Jack Straw Lighthouse, to Rockport, including the islands therein.
Henry Hunt.....	do	Rockport.....	The waters of River St. Lawrence around the LaRue's Island.
John H. Davis.....	Overseer....	Gananoque	The waters of the River St. Lawrence extending from Sheriff's Point to Head of Grenadier Island.
Wm. Poole.....	do	Poole's Resort.....	About 32 miles of the waters of the River St. Lawrence, extending from Rockport to Prescott.
Sydney Pattison.....	Warden	Rockport.....	About 32 miles of the waters of the River St. Lawrence from Gananoque to Brockville.
John Mooney.....	Overseer....	Maitland	About 60 miles of the waters of the River St. Lawrence from Brockville to Cornwall.
Robt. P. Boyd.....	do	Lyn.....	About 6 miles of the waters of the River St. Lawrence, extending 3 miles above and 3 miles below Cole's Shoal Lighthouse.
Donald J. McDonald..	do	Alexandria.....	That part of St. Lawrence River fronting on the counties of Stormont and Glengarry, including the inland waters of said counties.
Olivier Miron.....	do	Alfred	The waters of the South Nation River, county of Prescott, comprising about 50 miles of inland waters.
Jas. O. Hyndman.....	do	South Mountain..	For that portion of the South Nation River, flowing through the counties of Dundas and Glengarry, including the inland waters of said counties.
W. W. Boucher.....	do	Ottawa	The waters of the Ottawa River and its tributaries, extending from Ottawa to the town line boundary of Fitzroy Township, in the county of Carleton.
Jas. McKenzie.....	do	Pembroke	The Ottawa River, extending from the head of Allumette Rapids to Mattawa.
Archibald Acheson	do	Westmeath.....	About 25 miles of the Ottawa River, comprising Lower Allumette and Coulange Lakes.
J. S. Richardson..	do	Sturgeon Falls ...	The waters of Lake Nipissing, Mattawa River and French River and tributaries.
David E. Bastedo.....	do	Bracebridge	The inland waters of the townships of Macauley, McLean, Ridout in N. R. Ontario Co., and Franklin, Brumel and Stephenson in Muskoka.
Geo. R. Steele.....	do	Lorimer Lake....	The inland waters of the townships of Cowper, Foley, Christie, McDougall, McKellar, Ferguson, Carling, Shawanaga, Burpee, Hagerman, Harrison, Burton, McKenzie and Ferrie, in the districts of Muskoka and Parry Sound, comprised within an area of about 1,000 square miles.
Edmund Forsyth.	do	Loring.....	The inland waters of Parry Sound, in the townships of Walbridge, Brown, Wilson Mills, Mowat, Blair, McKonkey and Hardy.
J. G. Rumsey.....	do	Huntsville.....	The inland waters of the townships of Chaffey, Cardwell, Stisted, Sinclair, Bethune, Monteith, McMurrich, Perry, Spence, Ryerson, Armour and Proudfoot, in the districts of Muskoka and Parry Sound, comprised within an area of about 1,000 square miles.
Wm. Lockhart.....	do	Denville.....	The inland waters of the townships of Croft, Chapman, Strong, Jolly, Ferries, Lount, Machar, Laurier, Mills, Pringle, Gurd and Himsworth, in the districts of Muskoka and Parry Sound, comprised within an area of about 1,000 square miles.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF ONTARIO—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Henry W. Gill.....	Overseer...	Ufford.....	Lakes Rosseau and Skelton, in the county of Simcoe and districts of Muskoka and Parry Sound.
Henry Castle.....	do	Gravenhurst.....	Lakes Muskoka and Joseph, in the county of Simcoe.
L. S. Sanders.....	do	Barrie.....	About 110 miles of the waters of the north shore of Lake Simcoe and its tributaries, Couchiching and Holland Rivers.
E. H. Cameron.....	do	Beaverton	Lake Simcoe from Cook's Bay to Beaverton.
Geo. Clarke	do	Orillia	The waters of Lake Couchiching and Severn River, in the counties of Simcoe, Muskoka and Ontario.
Wm. McDermot	do	Beeton.	The inland waters of the south riding of the county of Simcoe, comprised within an area of about 900 square miles.
H. McFayden	do	Durham.....	The head waters of Saugeen River and tributaries, comprising an area of about 1,000 square miles.
Orra Bishop	do	Wilkesport.	The north branch of Sydenham River, from junction with main river to its sources, comprising about 20 miles.
Peter McCann.....	do	London.....	About 65 miles of the River Thames, from Wardsville to London.
Theo. Peltier.	do	Dover South....	About 25 miles of the River Thames, from Lewisville to its mouth.
W. P. Croome.....	do	Brantford.....	About 150 miles of the waters of the Grand River and its tributaries, from Brantford upwards.
Geo. Henwood	do	do	The inland waters of the counties of Brant, Waterloo, Oxford, Norfolk and Haldimand.
W. B. Jelly.....	do	Bowling Green....	The inland waters of the North Riding of the county of Wellington, comprised within an area of about 600 square miles.
Joseph Graham.....	do	Claude.....	About 25 miles of the waters of River Credit, extending from Orangeville to Norval; together with the inland waters of the townships of Mono, East Garafraxa, Amaranth, Albion, Luther, Melancthon, Erin, Caledon, Eramosa and Esquesing, comprised within an area of about 500 square miles.
David Coleman.....	do	Alton.....	The inland waters of the county of Cardwell, comprised within an area of about 400 square miles.
Alex. Blakely.....	do	Port Credit.....	About 1½ miles of the waters of the River Credit, from Norval to its mouth, in the county of Peel.
Nelson Simmons.....	do	Meyersburg.	The waters of Trent River, in the counties of Northumberland and Hastings, comprising about 80 miles.
John Martin.....	do	Raglan.	Lake Scugog, including Lindsay and Scugog Rivers, in the counties of Durham, Victoria and Ontario, about 50 miles.
J. C. Bowen.....	do	Marmora	Crow Lake, Belmont Lake and Crow River, in the counties of Hastings and Peterboro'.
Geo. W. Fitzgerald.....	do	Lakefield	The inland waters of the county of Peterboro' within the townships of Harvey, Burleigh, Dummer, Douro, Smith and Ennismore.
David Breeze.....	do	Peterboro'	Otonabee River, extending from Peterboro' to Rice Lake, in the county of Peterboro'.
Wm. Gainforth	do	Haliburton.....	The waters of Gull and Burnt Rivers and tributaries, together with Drag, Eagle, Moose, Redstone, Crooked and other lakes, lying within the east riding of the county of Peterboro', and comprised within an area of about 400 square miles.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF ONTARIO—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
B. H. Sweet.....	Overseer....	Bancroft.....	The inland waters of the townships of Wollaston, Limerick, Cashel, Farraday, Dunganon, Mayo, Herschel, Monteagle, Carlow, McClure, Wicklow, Bangor, in the county of Hastings, and comprised within an area of about 1,000 square miles.
H. R. Purcell.....	do	Enterprise.....	The inland waters of the townships of Camden, Portland, Loughboro', Sheffield and Kennebec, in the counties of Addington and Frontenac, comprised within an area of about 500 square miles.
Robt. A. Gilbert..	do	McLaren Depot..	The inland waters of the townships of Palmerton, Clarendon, North Canonto, South Canonto and Miller, in the county of Addington, and comprised within an area of about 500 square miles.
George Lake.....	do	Tichbourne.....	The inland waters of the townships of Bedford, Hinchinbrooke, Olden and Oso, in the county of Frontenac, and comprised within an area of about 400 square miles.
Samuel Boddy	do	Athens.....	Upper Beverley Lake, Bass Lake, Little Lake, Wiltse Lake and Mud Lake, in the county of Leeds.
David W. Edgar.....	do	Morton	Upper Beverley Lake and tributaries to Morton and Lyndhurst and Griffin Lake, in the county of Leeds.
John Moorhead	do	Long Point..	From Lyndhurst to the division line, between Leeds and Lansdowne, in the county of Leeds.
James Greer.....	do	Outlet	Gananoque River from Marble Rock to division line, between the township of Leeds and Lansdowne, including South Gananoque and Round Lake and Cherry Pound, in the county of Leeds.
Wm. Hicks.....	do	Athens.....	The waters of Charleston Lake, in the county of Leeds.
George Jeacle.....	do	Westport.....	The waters of Rideau, Upper Rideau, Openicon, Otty, and neighbouring lakes, in the county of Leeds, comprised within an area of about 200 square miles.
Eph. Deacon.....	do	Bolingbroke	The waters of River Tay and tributaries and Fall Bay River, in the county of Lanark, comprising about 35 miles.
Alexander Wilson...	do	Carleton Place...	About 60 miles of the waters of Mississippi River and Lake, in the county of Lanark.
R. O. Campbell	do	Kemptville.....	Rideau River and tributaries, from Ottawa to Burritt's Rapids, including Jock River, in the county of Carleton, comprising 55 miles.
Matthew Riddell...	do	Mohr's Corners...	Ottawa River, from the eastern town line boundary of Fitzroy to eastern town line of McNab, including Lake des Chats.
George Russell.....	do	Arnprior	Ottawa River, extending from the eastern town line boundary of McNab to the western boundary of Horton, having joint jurisdiction over Lake des Chats.
M. L. Russell.....	do	Renfrew	The waters of Bonnechère River and tributaries, in the county of Renfrew, comprising about 50 miles.
Hugh Gallagher...	do	Lake Clear, county Renfrew.	The inland waters of townships Sebastopol, Radcliff, Lyndoch and Gratton, in the county of Renfrew, comprised within an area of about 400 square miles.
Geo. Douglas.....	do	Snake River.....	The waters of Muskrat Lake and Snake River, in the county of Renfrew, comprised about 25 miles.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF ONTARIO—*Concluded.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Walter Yuill.....	Overseer....	Calabogie.....	The waters of Calabogie Lake and the inland waters, of the township of Bagot, county of Renfrew, comprised within an area of about 100 square miles.
Jas. Colcleugh.....	do	Rat Portage.....	Lake of the Woods.
R. J. N. Pither.....	do	do	Lake of the Woods. (Indian Agent.)
James McCracken	do	Couchiching.....	Rainy Lake and Lake Seul. do
J. McIntyre.....	do	Fort William.....	Eagle Lake. do
J. P. Donelly.....	do	Port Arthur.....	Nepigon River. do

PROVINCE OF QUEBEC—TIDAL DIVISION—SOUTH SHORE.

Wm. Wakeham.....	Fishery Officer.	Gaspé Basin.....	Lower St. Lawrence River and Gulf.
J. U. Gregory.....	Agent of M. and F., and Fishery officer.	Quebec.....	Having jurisdiction in the whole province of Quebec.
J. A. Verge.....	Overseer....	Cross Point.....	The estuary division of the River Restigouche, extending from Point Maguasha to Head of Tide, on the Quebec side, and from Dalhousie to Head of Tide on the New Brunswick side, comprising about 60 miles.
Pierre Cyr.....	do	Nouvelle	About 35 miles of the waters of Bay des Chaleurs, extending along the coast from Maguasha to Grand Cascapedia River, including the estuary thereof.
John Smith.....	do	New Carlisle.....	About 40 miles of the waters of Bay des Chaleurs, extending along the coast from the mouth of Grand Cascapedia River to Paspebiac.
Walter C. Ross.....	do	Hopetown.....	About 80 miles of the waters of Bay des Chaleurs, extending along the coast from Paspebiac to Point Macquereau.
Henry Jones.....	do	Little River West, Gaspé.	That portion of the waters of the county of Gaspé from corner of the Beach to Point Macquereau, including Bonaventure Island, Little Pabos, Grand Pabos and Grand Rivers.
Geo. T. Annett.....	do	Peninsula, Gaspé.	That portion of the waters of the county of Gaspé from Cape Rosier to corner of the Beach, including Dartmouth, York, St. John and Malbaie Rivers.
Pierre Thériault.....	do	Griffin Cove, Gaspé	That portion of the waters of the county of Gaspé, from Faure Point to Cape Rosier.
J. A. Chevrier.....	do	Amherst.....	About 100 miles of the waters of the Gulf of St. Lawrence around the Magdalen Islands.
P. L. Joncas.....	Officer and Collector of Customs.	House Harbour, Magdalen Islands	All the Magdalen Islands except Amherst and Entry Islands. Specially connected with the Fishing Bounty.
Joseph Lemieux	Overseer....	Montlouis	About 80 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Gaspé, and extending from Cape Rosier to Montlouis.
Jos. I. Létourneau.	do	Ste. Anne des Monts.	About 80 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Gaspé, and extending from River Ste. Anne des Monts to Cap Chatte.
Johnny Joncas.....	do	Matane.....	About 54 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Rimouski, and extending from Cap Chatte to River Blanche; together with the River Matane, comprising about 12 miles of inland waters.
L. E. Grandin	do	Rimouski.....	About 45 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Rimouski, and extending from River Blanche to Rimouski.

SCHEDULE of Fishery Officers, &c.—*Continued.*

PROVINCE OF QUEBEC—TIDAL DIVISIONS—NORTH SHORE.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
.....	Overseer....	Rimouski	About 35 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Rimouski, and extending from Rimouski, to the division line between the counties of Rimouski and Temiscouata.
Nap. Levesque.....	do	Isle Verte.....	About 30 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Temiscouata.
Xavier Pelletier.....	do	Ste. Anne de la Pocatière.	About 45 miles of the waters of the south shore of the River St. Lawrence, fronting on the county of Kamouraska.
.....	do .....	.....	About 70 miles of the waters of the south shore of the River St. Lawrence, fronting on the counties of L'Islet, Montmagny, Bellechasse and Lévis, extending from Ste. Anne de la Pocatière to Point Lévis.
L. P. Huot.....	do	St. Roch de Québec	About 50 miles of the waters of the north and south shores of the River St. Lawrence, around the Island of Orleans.
U. Bhéreur.....	do	Malbaie	About 60 miles of the waters of the north shore of the River St. Lawrence, fronting on the county of Charlevoix, and extending from River du Gouffre to the division line between the counties of Charlevoix and Saguenay.
L. N. Catellier.....	do	Tadoussac.....	About 80 miles of the waters of the north shore of the River St. Lawrence, fronting on the county of Saguenay and extending from the division line between the counties of Charlevoix and Saguenay to Bersimis; and the tidal waters of the River Saguenay from its mouth to Chicoutimi, comprising 70 miles; in all, 150 miles.
N. A. Comeau.....	do	Godbout.....	About 115 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the county of Saguenay and extending from Manicouagan to Baie des Rochers, including the estuaries of Godbout, Trinity and Pentecost Rivers.
T. Mignault.....	do	Montmagny . .	About 75 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the county of Saguenay and extending from Baie des Rochers to Point St. Charles, including the estuaries of Marguerite and Moisie Rivers.
Geo. Duberger.....	do	Pointe-à-Pic, Co. Charlevoix.	About 105 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the county of Saguenay and extending from Point St. Charles to Esquimaux Point, including the estuaries of the St. John and Mingan Rivers.
Geo. Gaudin.....	do	Cape Cove, Gaspé.	About 100 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the county of Saguenay and extending from Esquimaux Point to Natashquan River, including the estuaries of the Rivers Agwanus, Nabissippi and Natashquan.
Jean Legouvé.....	Warden	Lobster C've, Gaspé	About 140 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the county of Saguenay and extending from Cape Whittle to Checatia.
W. H. Whitely.....	do	St. John's, Nfld...	About 65 miles of the waters of the north shore of the Gulf of St. Lawrence, fronting on the county of Saguenay and extending from Checatia to Blancs Sablons, the boundary line between Quebec and Newfoundland, on the coast of Labrador, including the estuary of the Esquimaux River.

SCHEDULE of Fishery Officers, &c.—*Continued.*

PROVINCE OF QUEBEC—NON-TIDAL DIVISIONS.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Alf. Blais.....	Overseer...	Causapsal.....	About 30 miles of the waters of Lake and River Metapedia, in the county of Bonaventure, from head of Lake to Causapsal.
Henri Côté.....	do	Baie St. Paul.....	Lakes in rear of Murray Bay and Bay St. Paul.
Jos. Simard.....	do	Ste. Agnès.....	do
J. F. Picotin.....	do	Drummondville.....	About 60 miles of the River St. Francis, in the counties of Yamaska and Drummond, extending from its mouth to Richmond.
N. A. Beach.....	do	Georgeville.	The eastern shore of Lake Memphremagog, in the county of Stanstead, and waters extending to the middle of the Lake.
Horace Green.....	do	East Bolton.....	The western shore of Lake Memphremagog, in the county of Brome, and waters extending into the Lake.
Sylvester E. Pheps.....	do	Bolton Centre	Inland waters, township of Bolton, East and west, in the county of Brome.
P. C. Bourke.....	do	Somerset	The inland waters of the county of Megantic, comprised within an area of 850 square miles.
J. Laberge.....	do	Châteauguay.....	About 40 miles of the waters of the River St. Lawrence, fronting on the county of Châteauguay, including Châteauguay River.
John Kelly.....	do	Beauharnois	About 50 miles of the waters of River St. Lawrence, fronting on the counties of Beauharnois and Huntingdon; together with about 35 miles of the waters of Châteauguay and Trout Rivers.
J. O. Dion.....	do	Chambly Canton..	About 43 miles of the Richelieu River, extending from Sorel to Richelieu Village.
Jas. Finlay.....	do	St. Johns East....	About 30 miles of the waters of Richelieu River, extending from St. Johns to Lake Champ-lain.
P. E. Luke.....	do	Philipsburg.....	About 15 miles of the waters of Missisquoi Bay and Pike River, in the county of Missisquoi.
P. W. Nagle.....	do	Sherbrooke.....	The inland waters of the county of Stanstead, comprised within an area of about 540 square miles.
Joel Shurtleff.....	do	Compton.....	The inland waters of the county of Compton, comprised within an area of about 1,600 square miles.
A. L. Darche.....	do	Sherbrooke.....	The waters of the counties of Richmond and Wolfe.
Allan McLeod.....	do	Echo Vale.....	About 10 miles of the waters of Lake Megantic and Spider in the county of Compton.
W. G. Green.....	do	Knowlton.....	Brome Lake.
John McCaw.....	do	Sherbrooke.....	Lakes in counties of Megantic and Wolfe.
V. Veilleux.....	Warden....	St. Ephrem de Tring	The inland waters of the county of Beauce, comprised within an area of about 1,600 square miles.
Chas. Vadeboncoeur.	Overseer....	Three Rivers.....	About 25 miles of the River St. Lawrence and Lake St. Peter, fronting on the county of St. Maurice, including the inland waters of said county, and the city of Three Rivers.
Denis Shooner.....	do	Pierreville.....	That portion of Lake St. Peter fronting on the county of Yamaska and the River St. Francis within the limits of the said county.
Geo. Boisvert.....	do	Bécancour.....	About 36 miles of the waters of the River St. Lawrence and Lake St. Peter, fronting on the county of Nicolet.
Joseph Charbonneau....	do	St. Césaire.....	Yamaska River and its tributaries from West Farnham to St. Hugues, including Black River.
S. A. Grant.....	do	Louiseville.....	About 35 miles of the waters of the River St. Lawrence and Lake St. Peter, fronting on the counties of Maskinongé and Berthier, including the islands in front.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF QUEBEC—NON-TIDAL DIVISIONS—*Concluded.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Wm. Ritchie.....	Overseer....	Chilton.....	Inland waters of the county of Montcalm.
Gédéon, Magnan.....	do	L'Épiphanie.....	St. Lawrence River fronting on the counties of L'Assomption and Verchères.
Jos. Boivin.....	do	River Beaudet....	About 20 miles of the waters of the River St. Lawrence, fronting on the county of Soulanges, and extending from Point Beaudet to Coteau Landing.
Narcisse Lavallée.....	Warden.....	Sorel.....	That portion of the waters of the River St. Lawrence fronting on the county of Richelieu, including the islands therein.
John Morris.....	Overseer....	St. Lambert.....	About 50 miles of the waters of the River St. Lawrence, fronting on the counties of Laprairie, Chambly et Verchères.
Julien Montpetit.....	do	Isle Perrot.....	About 15 miles of the waters of the River St. Lawrence, surrounding Isle Perrot.
Jos. Lauzon.....	do	Terrebonne.....	The Rivers Jésus and des Prairies, comprising about 50 miles.
Jos. Filiatrault.....	do	Ste. Adèle, Terrebonne Co.	The inland waters of the townships of Morin and Beresford, in Terrebonne and Wolfe Counties, and de Salaberry and Grandison, in Argenteuil county, comprised within an area of about 500 square miles.
Toussaint Cloutier	do	Piedmont do ..	The inland waters of the townships of Abercrombie, Wexford and Kilkenny, in Terrebonne and Montcalm Counties, comprised within an area of about 300 square miles.
Damien Filiatrault	do	Ste. Rose, Laval Co.	That portion of River Jésus from its mouth to division line between Ste. Rose and St. François de Sales in Laval and Terrebonne Counties.
R. W. Jones.....	do	St. Andrew's East.	About 15 miles of the waters of the north side of the Ottawa River extending from Oka to Carillon.
Theo. Sabourin.....	do	Rigaud.....	About 30 miles of the waters of the south side of the Ottawa River, extending from Cascades to Point Fortune.
Jos. Marion	do	Hull	The waters of the Ottawa River, fronting on the county of Ottawa, comprising about 75 miles.
Erwin Mohr.....	do	South Onslow	The waters of the Ottawa River, fronting on the county of Pontiac, extending from the division line between the counties of Ottawa and Pontiac to Fort Coulonge and comprising about 50 miles.
J. T. Coghlan.....	do	Chapeau.....	The waters of the Ottawa River, fronting on the county of Pontiac, extending from Fort Coulonge to Des Joachims, and comprising about 75 miles.
Robt. Joynt.....	Warden	Joynt.....	The inland waters of the township of Masham, in the county of Ottawa, including Bernard Lake, comprised within an area of about 90 square miles.
Emiel Weisener.....	Overseer ...	Blanche	The waters of the township of Mulgrave and Lathbury, Ottawa County.
R. C. W. McCuaig.....	do	Ottawa.....	The inland waters of the township of Wakefield, Ottawa County.

PROVINCE OF NOVA SCOTIA.

Bertram, A. C	Inspector of Fisheries.	North Sydney ...	District No. 1, comprising the Island of Cape Breton.
Hockin, Robert.....	do	Pictou.....	District No. 2, comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NOVA SCOTIA—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Kinney, J. R.	Inspector of Fisheries.	Yarmouth.	District No. 3, comprising the counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's.
Johnston, H. W.	Agent M. & F. & Fishery Officer.	Halifax.	Having jurisdiction over the whole of Nova Scotia.
		<i>Annapolis County.</i>	
Bailey, W. M.	Overseer.	Round Hill.	The county of Annapolis.
		<i>Antigonish County.</i>	
Aylmer, J. R.	Warden.	Pomquet Forks, Antigonish.	From mouth of harbour to Forks; from thence on the Pomquet River to V. Chisholm's Mills, and from Forks, on the Black River, to Falls.
Cameron, Lochlin.	do.	Fraser's River, Antigonish.	From McWilliam's bridge to head of lake.
Chisholm, Hugh.	do.	Lower South River, Antigonish.	From Antigonish Harbour to McWilliam's, or St. Andrew's Bridge.
Chisholm, Donald.	do.	Salt Springs, Antigonish.	From Trotter's Mill Brook to W. Thompson's Dam.
Dexter, John.	do.	Antigonish.	From Antigonish Harbour (foot of marsh) to Trotter's Mill Brook; thence up said brook to Trotter's Mill, including both branches of West River and Bailey's Brook.
Fraser, Duncan.	do.	St. Joseph.	From Pinketown Bridge to Stewart's Mill.
Macadam, Alex.	do.	West River.	From Thompson's Dam to Addington Forks Bridge.
McDougall, Arch'd.	do.	McNair's Cove, Cape George.	From John McDonald, (Bun's) Cove, north side of Cape George, to Crebbling Head, St. George's Bay.
McInnes, Donald.	do.	Addington Forks.	Addington Forks.
Randall, Albert.	do.	Bayfield.	From shore to lake.
		<i>Cape Breton County.</i>	
Quinan, Francis.	Overseer.	Sydney.	Division No. 1.—The seacoast and inland waters of the county of Cape Breton lying north of a line drawn from the south end of Forks Lake to False Bay, extending west as far as a line drawn from the same point on Forks Lake to the head of the North West Arm of Sydney Harbour; including the south side of North West Arm, South Arm, south side of Sydney Harbour to Low Point, and all the coast waters from Low Point to False Bay.
Hickey, Richard.	do.	North Sydney.	Division No. 2.—The sea coast and inland waters of the county of Cape Breton lying north and west of a line drawn from the head of the North West Arm of Sydney Harbour to the south end of Forks Lake; thence to Grand Narrows Bridge.
Burke, William.	do.	Mira Ferry.	Division No. 3.—The sea coast and inland waters of the county of Cape Breton lying south of a line drawn from the south end of Forks Lake to False Bay, and bounded on the south by a line drawn from the same point on Forks Lake to Marion Bridge, on Mira River; thence to Eagle Head on Gabarous Bay, including that portion of Mira River, east of Marion Bridge; also the waters around Scattarie Island.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NOVA SCOTIA—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Cape Breton County</i> —Concluded.			
McDonald, Alexander...	Overseer...	East Bay.....	Division No. 4.—The sea coast and inland waters of the county of Cape Breton, south of a line drawn from the south end of Fork's Lake to the Grand Narrows Bridge, and bounded on the east by a line drawn from the south end of Forks Lake to Marion Bridge, thence to Eagle Head on Gabarous Bay, including all that portion of Mira River lying south-west of Mira Bridge; also Gabarous and Fourchu Bays.
<i>Colchester County.</i>			
Gass, H.....	do	Tatamagouche ...	Northern Division, county Colchester, comprising Tatamagouche Bay, French and Waugh's Rivers.
Pollock, R. J.	do	Lower Stewiacke..	Stewiacke River (lower portion).
<i>Cumberland County.</i>			
Fowler, Elijah	do	Parrsboro'	Cumberland county, Western Division, including all streams flowing into the Bay of Fundy.
Gilroy, Geo. W.....	do	Oxford.....	Cumberland county, Eastern Division, embracing all streams emptying into the Straits of Northumberland.
Bland, George	do	Wallace Bridge...	County of Northumberland.
Wills, A. M.....	do	Pugwash.....	Smelt and oyster fisheries at Pugwash.
<i>Digby County.</i>			
Collins, J. A.....	do	Westport.	Western Division of Digby county, comprising the waters of St. Mary's Bay. Long and Brier Islands.
Cossoboom, J. W.....	do	Rossway.....	Eastern Division of Digby county, comprising the waters of Digby county, except those of St. Mary's Bay, and around Long and Brier Islands.
Journey, Robert.....	Warden ...	Weymouth	Sissiboo River.
McKay, Lochlin.....	do	Barton.....	St. Mary's Island.
Potter, Chas. T.....	do	Joggins River....	Joggins River to Bear River.
<i>Guysborough Co.</i>			
Cameron, Wm.....	Overseer..	Guysborough	Having jurisdiction over the whole county of Guysborough.
McQuarrie, Allan.....	do	Sherbrooke..	do do do
<i>Halifax County.</i>			
Bartlett, John H..	do	Terrance Bay....	Having jurisdiction over the whole county of Halifax.
Gaston, Robert.....	do	Pope's Harbour...	do do do
Rowlings, Geo.....	do	Musquodoboit Hr.	do do do
<i>Hants County.</i>			
.....	do	.....	Hants county, Western Division, from western county line to Walton.
Colter, John	Warden	Millford.....	Shubenacadie River.
Horne, Arch.....	do	Enfield.....	South end of Shubenacadie and Nine Mile River.
Mosher, James.....	do	Brooklyn.....	Rivers Meander and Herbert, from mouth to source.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NOVA SCOTIA—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Hants County—</i> Concluded.			
Mosher, Noah	Warden	Mosherville	Kennetcook River, from mouth to head of tide.
O'Brien, Jas.	do	Maitland	Walton and Kennetcook Rivers.
Smith, W. D.	Overseer	do	Shubenacadie River from Five Mile River to its mouth, and the south side of Cobequid Bay to Noël.
Snide, John	do	Shubenacadie	Shubenacadie River from Shubenacadie to and including Five Mile River.
<i>Inverness County.</i>			
McLean, D. F.	do	Port Hood	Division No. 1.—The sea coast of the county of Inverness south of Mabou Harbour, including South-west Mabou and Little Mabou Rivers, Port Hood, Seaside, Judique, Little Judique, Long Point, Creg-nish, Low Point, Port Hastings and Port Hawkesbury, and extending into the interior to the north-west arm of River Inhabitants; also all that portion of the inland waters of the county of Inverness, lying on the northern side of the county Victoria line, from James McKinnon's to Whycocomagh Bay, and from the western side of the road leading from Whycocomagh Bay through Glencoe and south-west ridge of Mabou to Mabou Bridge.
McEachern, Peter	do	Glendale	Division No. 2.—That portion of the county of Inverness lying on the southern side of the county Victoria line, from the head of Whycocomagh Bay (Port Hawkesbury and Port Hastings excepted), including River Inhabitants and its branches, River Denis and its branches, Malagawatch and West Bay.
McKeen, Lewis	do	Mabou	Division No. 3.—That portion of the county of Inverness lying on the northerly side of Mabou Harbour, including the main river of the same name north of Whycocomagh and all streams flowing into the northern side of Whycocomagh Bay; also the northern side of Mabou mouth, Coal Mines; Mabou Light Point, Port Ban, Broad Cove shore to Broad Cove Chapel on the sea coast and the waters of Lake Ainslie in the interior.
Coady, James	do	S. W. Margaree	Division No. 4.—That portion of the sea coast of the county of Inverness extending from Broad Cove Chapel, including Broad Cove Marsh, Chimney Corner, Margaree Island and Doucette's Cove to Delaney's Cove; also the waters of East Lake Ainslie, and the streams flowing into it, Loch Ban, S. W. Margaree River and its tributaries, and the main river of Margaree from the Forks to Margaree Harbour.
Ross, David	do	N. E. Margaree	Division No. 5.—That portion of the sea coast of the county of Inverness extending from Delaney's Cove northward, including Big Pond, Cheticamp Point, Eastern Harbour, Little River, Cape Rouge and Pleasant Bay to Meat Cove; also that portion of the north-east Margaree River from Margaree Forks to the source of Big Intervale, and all other streams to the county Victoria line.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NOVA SCOTIA—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>King's County.</i>			
Bishop, C. E.....	Warden	Horton.....	Gaspereaux River.
Brown, Philip.....	do	Blomidon.....	Blomidon.
Miller, Jas. S.....	Overseer	Canning.....	King's County.
Murphy, L. A.....	Warden	Gaspereaux.....	Gaspereaux River.
McIntyre, W.....	do	Aylesford.....	Annapolis River.
Reid, R. F.....	Overseer	Wolfville.....	King's County.
Thorpe, J. W.....	Warden	Hall's Harbour ..	Hill's Point to Cape Split.
<i>Lunenburg County.</i>			
Boylan, Edward.....	do	New Ross.....	Upper Gold River.
Burns, Amon.....	do	Upper La Have....	From Cooks to source of La Have River.
Cooney, Wilbur.....	do	Chester.....	East Branch, Middle River.
Croft, Wm.....	do	Chester Basin.....	East Gold River, from Bongard's Point to Gold River Branch, thence to Clarke's, Clinton's and Henry's Lakes.
Demon, David.....	do	Lower Gold River.	Lower Gold River.
Evans, David.....	Overseer	Chester.....	Lunenburg County, East Division, Middle Gold, Martin's and Mushamush Rivers.
Godard, C. E.....	do	Bridgewater.....	La Have River.
Keating, Michael.....	Warden	East River.....	East River.
Keddy, J. H.....	do	New Ross.....	Larder's River.
Mossman, Josiah.....	do	Bridgewater.....	From Henry Kock's to Knock's.
Meisner, Jacob.....	do	Chester.....	East River.
Schneisser, N.....	do	East LaHaveFerry	La Have River, from mouth to Wilkie's Cove.
Solomon, W. M.....	Overseer	Lunenburg.....	Western Division, Lunenburg County.
<i>Pictou County.</i>			
McPhie, Allan.....	do	Avondale.....	Eastern division, comprising the coast waters from Pictou Harbour to Antigonish County line, including French River, Barney's River, Bailey's Brook and streams tributary thereto.
McQueen, J. D.....	do	Little Harbour....	Southern Division, comprising Sutherland's River, Moose River, Garden of Eden Lake, East River, St. Mary's and stream tributary thereto.
Pritchard, A. O.....	do	New Glasgow.....	Central Division, comprising Pictou Harbour, Pictou Island, East, West and Middle Rivers of Pictou.
Sutherland, Robert.....	do	River John.....	Western Division, comprising the coast waters from Colchester County line to Cole's Reef at Pictou Harbour, and all waters flowing into these waters, viz.: River John and tributaries Toney River, Big Cariboo and Little Cariboo Rivers.
<i>Queen's County.</i>			
Freeman, J. N.....	do	Liverpool.....	Queen's County.
<i>Richmond County.</i>			
Lenoir, Alfred.....	do	Arichat.....	Division No. 1.—The sea coast and inland waters of Isle Madame, including the southerly half of the waters of Lennox Passage.
Cameron, Duncan.....	do	St. Peter's.....	Division No. 2.—That portion of the inland waters of the county of Richmond lying west of St. Peter's Canal, including the northerly half of the waters of Lennox Passage.
Murchison, John.....	do	Grand River.....	Division No. 3.—That portion of the sea coast, lakes and inland waters lying east of St. Peter's canals.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NOVA SCOTIA—*Concluded.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Shelburne County.</i>			
McGill, Wm. John	Overseer...	Shelburne	Shelburne County.
Goudey, E. S.	do	Barrington	From and including Clyde River to Yarmouth county line.
<i>Victoria County.</i>			
.....	do .....	.....	Division No. 1.—The sea coast and inland waters of the county of Victoria, lying north of a line drawn from Middle Head, which divides the north and south bays of Ingonish to the county line of Inverness.
Campbell, Chas. L	do	New Campbellton.	Division No. 2.—The sea coast and inland waters of the county of Victoria from Cape Breton County line, on Boularderie Island, to Lake O'Law Post Office, near Inverness County line, thence to the boundary of Division No. 1, at Middle Head, Ingonish, including the waters of Clyburn Brook.
McQuarrie, Donald	do	Middle River.....	Division No. 3.—That portion of the county including Bras d'Or Lake, with the inland waters and estuaries, from a line drawn from the angle in the county line of Cape Breton at Boularderie Island, to Lake O'Law Post Office.
<i>Yarmouth County.</i>			
Hatfield, J. A	do	Tusket	Yarmouth County.

PROVINCE OF NEW BRUNSWICK.

Pratt, J. H.	Inspectors of Fisheries and officer in command of Cruiser "Curlew,"	St. Andrew's.....	District No. 1, comprising the county of Charlotte, including the Islands of Campobello and Grand Manan, and Passamaquoddy Bay.
Chapman, Robert A.	Inspector of Fisheries.	Moncton	District No. 2, comprising the counties of Restigouche, Gloucester, Northumberland, Kent and Westmoreland.
Miles, H. S.	do ..	Oromocto	District No. 3, comprising the counties of Albert, St. John, King's, Queen's, Sunbury, York, Carleton and Victoria.
Harding, J. H.	Agent of M. and F., and Fishery Officer.	St. John.....	Having jurisdiction over the whole of New Brunswick.
<i>Albert County.</i>			
Stewart, Suthd	Overseer...	Alma.....	County of Albert.
Taylor, Wallace.....	Warden ...	Coverdale	Petitcodiac River.
Wilbur, Kinnear T	do	Midway, Harvey..	Germantown Lake and Shepody River.
<i>Charlotte County.</i>			
Brown, Barth	Overseer...	Campobello.....	Bay of Fundy around Campobello and West Isles.
Campbell, D. F.	do	St. Andrew's	County of Charlotte from Oak Bay to Point Lepreau.
Mathewson, John.	do	St. George.....	Inland waters of the parish of St. George, Pennfield and Lepreau.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NEW BRUNSWICK—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
<i>Charlotte County—</i> Concluded.			
Martin, Frederic.....	Overseer....	Grand Manan.....	Bay of Fundy, around Grand Manan Island.
McLaughlin, W. B.....	do	do	Spawning grounds, near southern head of Grand Manan Island.
<i>Gloucester County.</i>			
Aché, Adolphe.....	do	Shippegan.....	Shippegan.
Albert, Xavier D.....	do /	Caraget.....	Caraget Herring Banks.
Brown, Gavin	Warden.....	Tête à Gauche River.	From Brown's Mill down to mouth.
Calnan, John, jun.	do	Kinsale.....	That part of River Tête à Gauche, from Brown's Mills to source.
Dempsey, Miles.....	do	Salmon Beach	Salmon Beach, from Bass River to Grindstone Point.
Gibbs, Valentine.....	do	Pokemouche	Pokemouche.
Hache, J. L.....	Overseer....	Caraget.....	Caraget and Shippegan oyster beds, with St. Cimon's Inlet and River.
Hickson, James.....	do	Bathurst	River Nepissiguit and tributaries, with sea coast and streams, from Belledune River to Grindstone Point.
Landry, Arcade.....	do	Shippegan.....	District of Shippegan.
Marks, Wm.....	do	Miscou.....	Jurisdiction in whole county of Gloucester.
Robichaud, Olivier... ..	Warden.....	Ferguson's Point..	Coast from Northumberland County line to Green Point, with Big and Little Tracadie Rivers.
Sweeney, Wm	Overseer....	Grande Anse.....	Bay des Chaleurs, from Mill Stream to Belledune.
Thériault, James D.....	do	Green Point	Bay Chaleurs, from Grande Anse to Point Mizzenette.
Walsh, William.....	do	Pokemouche.....	District of Pokemouche.
Whelton, Michael.....	Warden.....	Pokeshaw.....	Pokeshaw.
<i>Kent County.</i>			
Boudreau, Ed.....	Guardian...	Little Buctouche River.	Little Buctouche River.
.....	.....	.....	Coast line and inland waters of the parish of Dundas.
.....	.....	.....	Coast line and inland waters of the parishes of Wellington and St. Mary's.
Hannah, William J.....	Overseer....	Richibucto.....	The whole of the county of Kent.
Leblanc, A. T	do	Legerville	Inland waters of the parishes of Harcourt and Huskisson.
Richard, Pierre L.....	do	St. Louis.....	Coast line and inland waters of the parishes of St. Louis, Carleton and Acadieville.
<i>King's County.</i>			
Belyea, J. A.....	do	Westfield.....	St. John River and Belle Isle Bay and streams running thereinto.
Fenwick, Edwin.....	Warden.....	Studholm.....	Millstream.
Gray, Justus H.....	Overseer....	Springfield.....	The waters in the parish of Springfield.
Heine, W. H.....	do	Norton Station....	The Kennebecassis River, from Apohaqui to Hampton.
Nowlan, Jas. D.....	do	Smith's Creek.....	From mouth of Smith's Creek and the waters in the parishes of Havelock, Waterford, Sussex and Hammond.
Pearson, I. R.....	Warden...	English Settlement	Washademoak Lake and its tributaries in King's and Queen's Counties.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF NEW BRUNSWICK—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
		<i>Northumberland County.</i>	
.....	Overseer.....		District No. 1—The north coast of Northumberland County extending from Gloucester County line up the Miramichi Bay and River to Oak Point as far as midchannel, including all bays, gullies, islands, rivers and streams entering therinto.
Williston, J. G.....	do ..	Bay du Vin.....	District No. 2—The south coast of Northumberland County, extending from Kent County line up the Miramichi Bay and River to Point au Carr as far as midchannel, including all bays, gullies, islands, rivers and streams entering therinto.
Abbott, Lemuel.....	do ..	Chatham	District No. 3—Both shores of the main Miramichi River extending from a line drawn from Point aux Carr on the south side to Oak Point on the north side, to its junction with the north-west and south-west Miramichi Rivers, together with all islands therein and all rivers and streams emptying therinto.
Hogan, Patrick.....	do	Newcastle	District No. 4—The north-west branch of the Miramichi River, with all its tributaries, extending from its junction with the main river to its sources.
Parker, Thomas.....	do	Derby.....	District No. 5—The south-west branch of the Miramichi River, with all its tributaries, extending from its junction with the main river to its sources.
		<i>Queen's County.</i>	
Case, Mayes.....	do	Wickham	The whole county of Queen's.
		<i>Restigouche County</i>	
.....	do	River Charlo.....	From Belledune to Dalhousie.
Verge, J. A	do	Cross Point.	From Dalhousie to tide head.
		<i>Sunbury County.</i>	
Griffith, Chas.....	Warden	Sheffield	St. John River, Indiantown to county line of York.
Hoben, G. W.....	Overseer....	Burton.....	do do do
		<i>St. John County.</i>	
Cochrane, John.....	do	I.C.R. Station, St. John.	City of St. John and vicinity with special reference to the detection and seizures of illegally caught fish shipped by railway.
O'Brien, John.....	do	Carleton, St. John.	St. John County.
Rourke, E. V.....	do	St. Martin's	Eastern part of St. John County, from Quaco Head to Goose River.
		<i>Victoria County.</i>	
Ryan, Thos. D.	do ..	Grand Falls.....	County of Victoria.
		<i>Westmoreland County.</i>	
Cormier, D. T.....	do	Pré d'en haut.....	Dorchester Bay.
Goodwin, Robt.	do	Bay Verte.....	The parishes of Sackville and Westmoreland.
		<i>York County.</i>	
Orr, Robt.	do ...	Fredericton.....	County of York.

SCHEDULE of Fishery Officers, &c.—*Continued.*

PROVINCE OF PRINCE EDWARD ISLAND.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Lord, A.	Agent of Marine & Fisheries & Fishery Officer.	Charlottetown	Having jurisdiction over the whole of P. E. I.
Hackett, Edward.	Inspector of Fisheries.	do	Prince Edward Island.
McBride, Patrick.	Overseer.	Central Bedeque..	Lot 26.—The county of Prince.
McCormack, Michael.	do	Souris	Having jurisdiction over the whole of P. E. I.

PROVINCE OF MANITOBA.

Tupper, R. Latouche.	Inspector.	Selkirk	Province of Manitoba.
Sutherland, M.	Asst. Insp.	Fernton	do
			1. Souris District—Bounded on the north by the 50th parallel of latitude from the western boundary of the province easterly to the 99th meridian line; on the east by the 99th meridian line from the 50th parallel southerly to the international boundary; on the south by the international boundary line to the western boundary of the province, and on the west by the western boundary of the province from the international boundary northerly to the 50th parallel north latitude.
			2. Portage la Prairie District—Bounded on the north by the 50th parallel of latitude from the 99th meridian line, easterly to the first principal meridian line from the 50th parallel southerly to the international boundary line from the first principal meridian line, westerly to the 99th meridian line; and on the west by the 99th meridian line from the international boundary line to the 50th parallel of latitude.
			3. Provencher District—Bounded on the north by the 50th parallel of latitude from the first principal meridian to the easterly boundary of the province; on the east by the eastern boundary of the province from the 50th parallel of latitude, southerly to the international boundary; on the south by the international boundary line from the eastern boundary of the province, westerly to the first principal meridian; and on the west by the first principal meridian from the international boundary, northerly to the 50th parallel of latitude.
			4. First Lake Winnipeg District—Bounded on the north by the 51st parallel of latitude from the first principal meridian, easterly to the eastern boundary of the province; on the east by the eastern boundary of the province from the 51st parallel of latitude, southerly to the 50th parallel of latitude on the south by the 50th parallel of latitude from the eastern boundary of the province, westerly to the first principal meridian; and on the west by the first principal meridian from the 50th parallel of latitude, northerly to the 51st parallel.

SCHEDULE of Fishery Officers, &c.—*Continued.*

PROVINCE OF MANITOBA—*Continued.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
			5. Lower Lake Manitoba District—Bounded on the north by the 51st parallel of latitude from the 99th meridian, easterly to the first principal meridian; on the east by the first principal meridian line from the 51st parallel of latitude, southerly to the 50th parallel; on the south by the 50th parallel of latitude from the first principal meridian, westerly to the 99th meridian line; and on the west by the 99th meridian line from the 50th parallel of latitude, northerly to the 51st parallel.
Muckle, J. A.	Overseer....	Birtle	6. Little Saskatchewan District—Bounded on the north by the 51st parallel of latitude from the western boundary of the province, easterly to the 99th meridian line; on the east by the 99th meridian line from the 51st parallel of latitude, southerly to the 50th parallel; on the south by the 50th parallel of latitude from the 99th meridian line, westerly to the western boundary; and on the west by the western boundary of the province from the 50th parallel of latitude, northerly to the 51st parallel.
			7. Lake Dauphin District—Bounded on the north by the 52nd parallel of latitude from the western boundary of the province, easterly to the 99th meridian line; on the east by the 99th meridian line from the 52nd parallel of latitude, southerly to the 51st parallel; on the south by the 51st parallel of latitude from the 99th meridian line, westerly to the western boundary of the province; and on the west by the western boundary of the province from the 51st parallel of latitude, northerly to the 52nd parallel.
Martineau, H.	Overseer....	Manitoba House..	8. Upper Lake Manitoba District—Bounded on the north by the 52nd parallel of latitude from the 99th meridian line, easterly to the first principal meridian; on the east by the first principal meridian line from the 52nd parallel of latitude, southerly to the 51st parallel; on the south by the 51st parallel of latitude from the first principal meridian to the 99th meridian line; and on the north by the 52nd parallel of latitude from the 99th meridian line, easterly to the first principal meridian.
			9. Second Lake Winnipeg District—Bounded on the north by the 52nd parallel of latitude from the first principal meridian, easterly to the eastern boundary of the province; on the east by the eastern boundary of the province from the 52nd parallel of latitude, southerly to the 51st parallel; on the south by the 51st parallel of latitude from the eastern boundary of the province westerly to the first principal meridian, and on the west by the first principal meridian from the 51st parallel of latitude southerly to the 52nd parallel.

SCHEDULE of Fishery Officers, &c.—*Continued.*PROVINCE OF MANITOBA—*Concluded.*

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
			10. Third Lake Winnipeg District—Bounded on the north by the northern boundary of the province from the 99th meridian line, easterly to the eastern boundary of the province; on the east by the eastern boundary of the province to the northern boundary of Manitoba, southerly to the 52nd parallel of latitude; on the south by the 52nd parallel of latitude from the eastern boundary of the province, westerly to the 99th meridian line, and on the west by the 99th meridian line from the 52nd parallel of latitude, northerly to the northern boundary of the province.
			11. Lake Winnipegosis District—Bounded on the north by the northern boundary of the province from the westerly boundary thereof easterly to the 99th meridian line; on the east by the 99th meridian line from the northern boundary of the province southerly to the 52nd parallel of latitude; on the south by the 52nd parallel of latitude from the 99th meridian line, westerly to the western boundary of the province from the 52nd parallel of latitude, northerly to the northern boundary of Manitoba.
			12. Grand Rapids District—Bounded on the north by the 54th parallel of latitude from a line in continuation of the western boundary of Manitoba, easterly to the 99th meridian line, on the east of the 99th meridian line from the 54th parallel of latitude, southerly to the north boundary of Manitoba; on the south by the northern boundary of the province from the 99th meridian line, westerly to the western boundary of Manitoba, and on the west by a line in continuation of the western boundary of the province, northerly to the 54th parallel of latitude.
			13. Fourth Lake Winnipeg District—Bounded on the north by the 54th parallel of latitude from the 99th meridian line, easterly to the 95th meridian line; on the east by the 95th meridian line from the 54th parallel of latitude, southerly to the northern boundary of Manitoba; on the south by the northern boundary of Manitoba from the 95th meridian line, westerly to the 99th meridian line; on the west by the 99th meridian line from the northern boundary of Manitoba northerly to the 54th parallel of latitude.
Gunne, Robt.....	Overseer....	Winnipeg.....	} Each within the limits of his district as a forest ranger. Within his district as Crown timber agent.
Toole, Wm.....	do	do	
Fee, Michael.....	do	do	
Stevenson, E. F.....	do	do	

SCHEDULE of Fishery Officers, &c.—*Continued.*

N. W. TERRITORIES.

Name.	Rank.	P. O. Address.	Extent of Jurisdiction.
Gilchrist, F. C.	Inspector...	Fort Qu'Appelle ..	The North-west Territories.
Foster, John.....	Overseer....	Silton	Long Lake, N.W.T.
Lucas, S. B.	do	Holbrooke.....	District of Peace Hills, Alberta.
McKenzie, R. S.	do	Stobart.	do Prince Albert, Saskatchewan.
Johnston, A. E.	do	Edmonton.....	} Fishery divisions comprise the limits of each officer's district as a forest ranger.
Thompson, J. R.	do	Calgary.....	
Cook, R. S.	do	Prince Albert....	
Aikman, T. H.	do	} Care of the Commissioner of Dominion Lands, Winnipeg.	} Fishery divisions comprise the limits of each officer's district as a homestead inspector in Manitoba and the North-west Territories.
Rogers, John.....	do		
Park, R. S.	do		
Arsenault, J. J.	do		
Allison, John.....	do		
Allison, W. H.	do		
De Balinhard, W. C.	do		

PROVINCE OF BRITISH COLUMBIA.

McNab, John.....	Inspector...	New Westminster.	Province of British Columbia.
McKay, J. W.	Overseer....	Kamloops	District of Yale.
Meason, W. C.	do	William's Lake...	The limit of his district as Indian Agent.
Phillips, Michael..	do	Kootenay.....	do do do
Higginson, T. S.	do	New Westminster.	do do Crown timber agent.
Lomas, Wm. H.	do	Cowichan.....	Cowichan District, Indian agency.
Todd, Chas.	do	Port Simpson.	District of Metlaketla Indians, North-west coast of British Columbia.
Ellison, Price.....	do	Vernon.....	Okanagan Lake and River, District of Yale, B.C.

All captains of the Fisheries Protection Service are also fishery officers, with power of a justice of the peace for all purposes of the Fisheries Act. For the year 1893 they are as follows :—

Capt. O. G. V. Spain, of the ss. "Acadie."
 Capt. S. Bélanger, of the ss. "La Canadienne."
 Capt. A. Finlayson, of the ss. "Stanley."
 *Capt. J. H. Pratt, of the ss. "Curlew."
 Capt. Geo. M. May, of the ss. "Constance."
 Capt. C. T. Knowlton, of the schr. "Vigilant."
 Capt. W. H. Kent, of the schr. "Kingfisher."

Besides the above named the following were also appointed fishery officers :—

Capt. Caleb A. Atkins, of ss. "Newfield," for province of Nova Scotia.
 Capt. Chas. T. Daykin, of ss. "Lansdowne," for province of New Brunswick.
 Capt. Alex. M. MacGregor, of ss. "Bayfield," for province of Ontario.
 Capt. Ed. Dunn, of ss. "Petrel," for province of Ontario.

*Capt. Pratt is also inspector of fisheries for the county of Charlotte, N.B.

SCHEDULE of Fishery Officers, &c.—*Concluded.*

FISH CULTURE.

Name.	Rank.	P. O. Address.
Samuel Wilmot.	Superintendent of Fish Culture for the Dominion	Ottawa.
A. B. Wilmot.	Officer in charge of Government Fish Hatchery	Newcastle, Ont.
William Parker.	do do	Sandwich, Ont.
John Walker.	do do	Ottawa.
L. N. Catellier.	do do	Tadousac, Que.
Henry Davis.	do do	Gaspé Basin, Que.
Alex. Mowat.	do do	Campbellton, N.B.
A. H. Moore.	do do	Magog, Que.
A. Ogden.	do do	Bedford Basin, N.S.
W. J. Dunlop	Asst. officer do	Sydney, C.B., N.S.
Isaac Sheasgreen.	Officer do	South Esk, N.B.
Chas. McCluskey	do do	Grand Falls, N.B.
John McNab	do do	New Westminster, B.C.
A. Ogden.	do Government Lobster Hatchery.	Bay View, Pictou, N.S.

RECAPITULATION.

Provinces.	No. of officers.
Ontario.	102
Quebec.	70
Nova Scotia	80
New Brunswick. . . .	55
Prince Edward Island	4
Manitoba and North-west Territories	21
British Columbia.	8
Fish Culture.	13
Officers and crews of seven fisheries protection vessels	175
Total.	528

In addition to the above regular staff, 175 temporary local guardians were employed during the year as occasion required.

APPENDIX No. 2.

FISHING BOUNTIES.

GENERAL STATEMENT of Fishing Bounty Claims received for the Year 1892.

Province.	County.	No. of Claims received.	No. of Claims rejected.	No. of Claims held in abeyance.	No. of Claims paid.
Nova Scotia	Annapolis	152	5		*148
	Antigonish.....	189	2		137
	Cape Breton ...	429	1		428
	Digby.....	336	9		327
	Guysboro'	1,211	17		1,194
	Halifax.....	1,506	14	2	1,490
	Inverness	541	1		540
	King's.....	45	2		43
	Lunenburg.....	1,049	2		1,047
	Pictou	64			64
	Queen's.....	294			294
	Richmond	998	13		985
	Shelburne	789	11		778
	Victoria	527	6		521
	Yarmouth	192	2		190
	Totals.....	8,272	85	2	8,186
New Brunswick.	Charlotte.....	455	8		447
	Gloucester.....	438	37	1	400
	Kent.....	118	1		117
	Northumberland.....	17			17
	Restigouche	8	8		
	St. John.....	22	6		16
	Westmoreland	9	5		4
	Totals.....	1,067	65	1	1,001
Prince Edward Island...	King's.....	562	6	3	*555
	Prince.....	362	6		356
	Queen's.....	141		1	140
	Totals	1,065	12	4	1,051
Quebec.....	Bonaventure.....	1,220	137		1,083
	Gaspé.....	2,513	56		2,457
	Rimouski	55			55
	Saguenay	637	28		609
	Totals.....	4,425	221		4,204

RECAPITULATION.

Nova Scotia.....	8,272	85	2	8,186
New Brunswick.....	1,067	65	1	1,001
Prince Edward Island.....	1,065	12	4	1,051
Quebec.....	4,425	221		4,204
Grand Totals.....	14,829	383	7	14,442

* NOTE.—The number of bounty claims paid for 1892 includes several applications for the years 1889 and 1890 held in abeyance for inquiry. This will explain the difference between claims paid and claims received after deducting those rejected and held in abeyance.

GENERAL STATEMENT of Payments made on account of Fishing Bounty Claims to
Boats and Vessels, for the year 1892.

Province.	County.	Amount paid.	Total.
		\$ cts.	\$ cts.
Nova Scotia.....	Annapolis.....	1,537 11	109,413 39
	Antigonish.....	813 75	
	Cape Breton.....	3,130 51	
	Digby.....	6,002 12	
	Guysboro'.....	8,582 45	
	Halifax.....	13,723 71	
	Inverness.....	4,860 89	
	King's.....	462 20	
	Lunenburg.....	35,317 36	
	Pictou.....	327 00	
	Queen's.....	2,641 61	
	Richmond.....	10,964 97	
	Shelburne.....	10,311 46	
	Victoria.....	3,134 00	
	Yarmouth.....	7,604 25	
New Brunswick.....	Charlotte.....	4,924 65	10,870 61
	Gloucester.....	4,468 09	
	Kent.....	662 50	
	Northumberland.....	385 00	
	St. John.....	337 87	
	Westmoreland.....	92 50	
Prince Edward Island...	King's.....	4,466 30	9,782 79
	Prince.....	3,949 85	
	Queen's.....	1,366 64	
Quebec.....	Bonaventure.....	6,474 00	29,694 35
	Gaspé.....	17,055 25	
	Rimouski.....	286 00	
	Saguenay.....	5,879 10	
	LESS—Refunds, N.S., \$3.00; N.B., \$6.00.....		159,761 14
			9 00
	Grand total.....		159,752 14

DETAILED STATEMENT showing Fishing Bounties paid to Vessels in each County for the Year 1892.

Province.	County.	Number of Vessels.	Tonnage.	Average Tonnage.	No. of Men.	Amount paid.
						\$ cts.
Nova Scotia	Annapolis ..	10	286	29	61	776 11
	Antigonish ..	1	11	11	1	24 75
	Cape Breton ..	7	120	17	31	324 51
	Digby	53	1,516	29	385	4,214 12
	Guysboro' ..	16	485	30	80	1,396 45
	Halifax	79	2,215	28	466	6,107 71
	Inverness ..	8	258	32	50	737 89
	King's	4	88	22	10	220 20
	Lunenburg ..	154	10,410	67	1,887	31,260 36
	Queen's	8	360	45	73	1,041 61
	Richmond ..	67	2,088	31	460	6,033 97
	Shelburne ..	56	2,113	38	496	5,905 46
	Victoria	2	34	17	4	85 00
	Yarmouth ..	42	2,295	54	607	6,709 25
	Totals	507	22,279	44	4,611	64,837 39
New Brunswick	Charlotte ..	53	911	17	160	2,519 65
	Gloucester ..	41	528	13	129	1,513 09
	Kent	2	30	15	3	47 50
	Northumberland ..	4	96	24	24	288 00
	St. John	7	92	13	22	271 87
	Westmoreland ..	1	26	26	5	71 50
	Totals	108	1,683	16	343	4,711 61
Prince Edward Island ..	King's	13	416	32	66	1,102 30
	Prince	12	462	38	59	1,276 85
	Queen's	5	105	21	14	250 64
	Totals	30	983	33	139	2,629 79
Quebec	Bonaventure ..	1	10	10	2	25 00
	Gaspé	4	125	31	28	363 25
	Saguenay	18	668	37	129	1,983 10
	Totals	23	803	35	159	2,371 35

RECAPITULATION.

Nova Scotia	507	22,279	44	4,611	64,837 39
New Brunswick	108	1,683	16	343	4,711 61
Prince Edward Island ..	30	983	33	139	2,629 79
Quebec	23	803	35	159	2,371 35
Grand totals	668	25,748	38	5,252	74,550 14

DETAILED STATEMENT of Fishing Bounties paid to **Boats** for the Year 1892.

Province.	County.	Number of Boats.	Number of Men.	Amount paid.
				\$
Nova Scotia.....	Annapolis.....	138	209	761
	Antigonish.....	136	219	789
	Cape Breton.....	421	795	2,806
	Digby.....	274	505	1,788
	Guysboro'.....	1,178	2,004	7,186
	Halifax.....	1,411	2,069	7,616
	Inverness*.....	532	1,196	4,123
	King's.....	39	68	242
	Lunenburg.....	893	1,055	4,037
	Pictou.....	64	88	327
	Queen's.....	286	438	1,600
	Richmond.....	918	1,338	4,931
	Shelburne.....	722	1,229	4,406
	Victoria.....	519	845	3,049
	Yarmouth.....	148	249	895
	Totals.....	7,679	12,307	44,576
New Brunswick.....	Charlotte.....	394	673	2,405
	Gloucester†.....	359	871	2,955
	Kent.....	115	168	615
	Northumberland.....	13	28	97
	St. John.....	9	19	66
	Westmoreland.....	3	6	21
	Totals.....	893	1,765	6,159
Prince Edward Island...	King's.....	542	941	3,364
	Prince.....	344	779	2,673
	Queen's.....	135	327	1,116
	Totals.....	1,021	2,047	7,153
Quebec.....	Bonaventure.....	1,082	1,790	6,449
	Gaspé.....	2,453	4,726	16,692
	Rimouski.....	55	77	286
	Saguenay.....	591	1,100	3,896
	Totals.....	4,181	7,693	27,323

RECAPITULATION.

Nova Scotia.....	7,679	12,307	44,576
New Brunswick.....	893	1,765	6,159
Prince Edward Island.....	1,021	2,047	7,153
Quebec.....	4,181	7,693	27,323
Totals.....	13,774	23,812	85,211
LESS—Refunds: *N.S., \$3; †N.B., \$6.....			9
Grand total.....	13,774	23,812	85,202

COMPARATIVE STATEMENT of Fishing Bounties paid, from 1882 to 1892 inclusive.

Number.	Province.	County.	1882.			1883.			1884.			Number.
			Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	
			Amount.	Amount.		Amount.	Amount.		Amount.	Amount.		
			\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1	Nova Scotia	Annapolis.....	472 00	1,998 00	2,470 00	838 00	1,207 50	2,045 50	648 00	1,503 50	2,151 50	1
2		Antigonish.....		840 00	840 00		482 50	482 50		799 50	799 50	2
3		Cape Breton.....	294 00	5,167 00	5,461 00	436 00	2,853 50	3,289 50	383 00	3,909 00	4,292 00	3
4		Colchester.....							64 00		64 00	4
5		Cumberland.....		20 00	20 00					7 50	7 50	5
6		Digby.....	1,436 00	4,118 66	5,554 66	2,652 00	2,182 50	4,834 50	3,322 84	2,254 50	5,557 34	6
7		(Guysboro').....	2,380 73	7,913 75	10,294 48	2,914 00	4,645 00	7,559 00	3,371 90	6,485 50	9,857 40	7
8		Halifax.....	3,599 50	11,118 31	14,717 81	6,020 00	6,080 50	12,100 50	5,834 00	7,898 00	13,732 00	8
9		Inverness.....	950 00	5,432 00	6,382 00	572 00	3,422 50	3,994 50	1,208 00	4,522 00	5,730 00	9
10		King's.....	46 00	125 00	171 00	146 00	137 50	303 50	196 00	70 50	266 50	10
11		Lunenburg.....	15,161 63	3,112 00	18,273 63	17,658 00	1,850 00	19,508 00	19,648 24	3,162 00	22,810 24	11
12		Pictou.....	202 00	95 00	297 00	202 00	120 00	322 00	177 76	107 50	285 26	12
13		Queen's.....	1,638 00	1,917 00	3,555 00	1,826 00	810 00	2,636 00	2,408 00	886 50	3,244 50	13
14		Richmond.....	3,853 15	7,998 50	11,851 65	3,558 00	4,225 00	7,783 00	3,266 58	6,325 00	9,591 58	14
15		Shelburne.....	7,294 00	4,332 00	11,626 00	8,744 00	2,326 50	11,070 50	8,928 27	2,781 50	11,709 77	15
16		Victoria.....	284 00	4,861 00	5,145 00	492 00	2,830 50	3,322 50	60 00	4,045 50	4,105 50	16
17		Yarmouth.....	7,825 09	1,615 00	9,440 09	9,486 00	695 00	10,181 00	9,758 00	971 50	10,729 50	17
18		Totals.....	45,435 50	60,663 22	106,098 72	55,544 00	33,888 50	89,432 50	59,274 59	45,659 50	104,934 09	18
19	New Brunswick.	Charlotte.....	2,140 00	5,641 00	7,781 00	2,380 00	2,830 00	5,210 00	2,792 00	3,035 00	5,827 00	19
20		Gloucester.....	422 00	5,368 00	5,790 00	492 00	3,568 50	4,060 50	508 00	4,799 00	5,307 00	20
21		Kent.....	768 00	965 00	1,733 00	266 00	1,197 50	1,463 50	246 00	764 50	1,010 50	21
22		Northumberland.....		45 00	45 00	68 00	52 50	120 50	66 00	68 00	134 00	22
23		Restigouche.....	28 00		28 00	52 00		52 00				23
24		St. John.....	984 00	591 00	1,575 00	861 20	587 50	1,448 70	956 00	260 00	1,216 00	24
25		Westmoreland.....		45 00	45 00		40 00	40 00		81 50	81 50	25
26		Totals.....	4,342 00	12,655 00	16,997 00	4,119 20	8,276 00	12,395 20	4,568 00	9,008 00	13,576 00	26

COMPARATIVE STATEMENT of Fishing Bounties paid, from 1882 to 1892, inclusive—Continued.

Number.	Province.	County.	1882.				1883.				1884.				Number.
			Vessels.		Boats.	Total.	Vessels.		Boats.	Total.	Vessels.		Boats.	Total.	
			Amount.	\$ cts.	\$ cts.	\$ cts.	Amount.	\$ cts.	\$ cts.	\$ cts.	Amount.	\$ cts.	\$ cts.	Amount.		$ cts.	$ cts.
27	P. E. Island.....	King's.....	252 00	5,024 00	5,276 00	293 14	2,790 50	3,083 64	475 44	3,028 00	3,503 44	3,503 44	27		
28	.....	Prince.....	316 00	6,709 00	7,025 00	418 00	3,429 50	3,847 50	520 00	3,642 00	4,162 00	4,162 00	28	
29	.....	Queen's.....	210 00	3,626 00	3,836 00	96 00	1,550 00	1,646 00	65 02	1,473 50	1,538 52	1,538 52	29	
30		Totals.....	778 00	15,359 00	16,137 00	807 14	7,770 00	8,577 14	1,060 46	8,143 50	9,203 96	9,203 96	30		
31	Quebec.....	Bonaventure.....	.....	8,945 00	8,945 00	.....	3,846 50	3,846 50	.....	5,508 00	5,508 00	5,508 00	31	
32	.....	Gaspé.....	2,070 00	17,899 75	19,969 75	2,152 00	9,302 50	11,454 50	1,906 00	13,879 50	15,785 50	15,785 50	32	
33	.....	Rimouski.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33	
34	.....	Saguenay.....	2,350 00	1,773 00	4,123 00	2,320 01	2,319 00	4,639 01	2,023 09	4,687 50	6,711 43	6,711 43	34	
35	.....	Temiscouata.....	.....	15 00	15 00	.....	.....	.....	.....	.....	.....	.....	35	
36		Totals.....	4,420 00	28,632 75	33,052 75	4,472 01	15,468 00	19,940 01	3,929 93	24,075 00	28,004 93	28,004 93	36		
RECAPITULATION.															
37	Nova Scotia.....	.....	45,435 50	60,663 22	106,098 72	55,544 00	33,888 50	89,432 50	59,274 59	45,659 50	104,934 09	104,934 09	37	
38	New Brunswick.....	.....	4,342 00	12,655 00	16,997 00	4,119 20	8,276 00	12,395 20	4,568 00	9,008 00	13,576 00	13,576 00	38	
39	P. E. Island.....	.....	778 00	15,359 00	16,137 00	807 14	7,770 00	8,577 14	1,060 46	8,143 50	9,203 96	9,203 96	39	
40	Quebec.....	.....	4,420 00	28,632 75	33,052 75	4,472 01	15,468 00	19,940 01	3,929 93	24,075 00	28,004 93	28,004 93	40	
41		Totals.....	54,975 50	117,309 97	172,285 47	64,942 35	65,402 50	130,344 85	68,832 98	86,886 00	155,718 98	155,718 98	41		

COMPARATIVE STATEMENT of Fishing Bounties paid, from 1882 to 1892, inclusive - *Continued.*

Number.	Province.	County.	1885.			1886.			1887.			Number.
			Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	
			\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1	Nova Scotia.	Annapolis.....	430 08	1,180 00	1,610 08	431 60	1,063 50	1,495 10	365 27	1,162 00	1,467 27	1
2		Antigonish.....		982 50	982 50		832 00	832 00		924 50	924 50	2
3		Cape Breton.....	210 00	4,012 50	4,222 50	392 00	3,765 00	4,157 00	374 14	3,600 00	3,974 14	3
4		Colchester.....	74 00		74 00	74 00		74 00	74 00		74 00	4
5		Cumberland.....										5
6		Digby.....	3,036 02	1,993 00	5,029 02	2,131 79	1,924 50	4,056 29	2,671 31	1,582 50	4,253 84	6
7		Guysboro'.....	3,312 53	7,129 50	10,442 03	2,936 50	7,521 00	10,457 50	2,210 58	7,963 50	10,174 08	7
8		Halifax.....	5,984 77	8,398 00	14,382 77	4,947 02	8,200 50	13,147 52	5,097 61	8,333 50	13,431 11	8
9		Inverness.....	844 00	4,913 50	5,797 50	1,294 12	5,265 00	6,559 12	1,582 88	5,091 00	6,673 88	9
10		King's.....	54 00	1,185 50	1,239 50	96 00	297 50	393 50	218 00	242 00	460 00	10
11		Lunenburg.....	17,315 34	2,947 00	20,262 34	16,755 64	3,122 00	19,877 64	16,154 33	3,751 50	19,905 83	11
12		Pictou.....	154 00	132 00	286 00	156 00	94 50	250 50		130 00	130 00	12
13		Queen's.....	1,854 00	1,190 50	3,044 50	1,814 60	957 00	2,771 00	1,650 00	1,212 50	2,862 50	13
14		Richmond.....	3,164 49	7,046 00	10,210 49	2,650 00	6,941 00	9,591 00	2,762 86	7,704 00	10,466 86	14
15		Shelburne.....	9,198 00	3,201 50	12,399 50	7,880 67	3,072 00	10,952 67	6,678 62	3,687 00	10,365 62	15
16		Victoria.....	166 00	4,487 00	4,653 00	222 20	4,599 50	4,821 70	88 00	4,600 50	4,688 50	16
17		Yarmouth.....	9,415 50	968 50	10,384 00	8,513 60	829 00	9,342 60	8,539 40	1,230 50	9,769 90	17
18	Totals.....		55,252 73	48,767 00	104,019 73	50,295 54	48,494 00	98,789 54	48,407 03	51,215 00	99,622 03	18
19	New Brunswick.	Charlotte.....	2,508 25	3,937 00	6,445 25	2,579 67	4,246 00	6,825 67	3,292 65	4,681 50	7,974 15	19
20		Gloucester.....	452 00	5,876 00	6,328 00	516 00	6,462 00	6,978 00	618 75	7,136 00	7,754 75	20
21		Kent.....	184 00	1,309 50	1,493 50	206 00	1,473 50	1,679 50	370 00	1,728 50	2,098 50	21
22		Northumberland.....	180 00	80 50	260 50	592 00	80 50	672 50	445 00	229 00	674 00	22
23		Restigouche.....				28 00	7 00	35 00				23
24		St. John.....	902 00	367 50	1,269 50	1,054 40	424 00	1,478 40	786 25	291 00	1,077 25	24
25		Westmoreland.....		111 50	111 50		225 50	225 50		121 00	121 00	25
26	Totals.....		4,226 25	11,682 00	15,908 25	4,976 07	12,018 50	17,894 57	5,512 65	14,187 00	19,699 65	26

COMPARATIVE STATEMENT of Fishing Bounties paid, from 1882 to 1892, inclusive—Continued.

Number.	Province.	County.	1885.			1886.			1887.			Number.
			Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	
			Amount.	Amount.	Amount.	Amount.	Amount.	Amount.	Amount.	Amount.	Amount.	
			\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
27	P. E. Island	King's	626 15	4,090 50	4,716 65	770 44	4,149 50	4,919 94	1,225 78	4,396 00	5,621 78	27
28		Prince	426 00	3,552 50	3,978 50	967 40	3,413 00	4,380 40	1,127 00	3,636 00	4,763 00	28
29		Queen's	76 00	1,433 50	1,509 50	271 53	1,364 00	1,635 53	734 73	1,409 00	2,143 73	28
30		Totals	1,128 15	9,076 50	10,204 65	2,009 37	8,926 50	10,935 87	3,087 51	9,441 00	12,528 51	30
31	Quebec	Bonaventure		8,005 00	8,005 00		9,294 00	9,294 00		8,862 00	8,862 00	31
32		Gaspé	1,524 26	14,900 50	16,424 76	1,176 98	15,465 50	16,642 48	1,233 98	15,335 25	16,569 23	32
33		Rimouski										33
34		Saguenay	1,988 00	5,047 00	7,035 00	2,227 63	5,119 50	7,347 13	2,354 00	4,122 50	6,476 50	34
35		Temiscouata										35
36		Totals	3,512 26	27,952 50	31,464 76	3,404 61	29,879 00	33,283 61	3,587 98	28,319 75	31,907 73	36

RECAPITULATION.

37	Nova Scotia		55,252 73	48,767 00	104,019 73	50,295 54	48,494 00	98,789 54	48,407 03	51,215 00	99,622 03	37
38	New Brunswick		4,226 25	11,682 00	15,908 25	4,976 07	12,918 50	17,894 57	5,512 65	14,187 00	10,699 65	38
39	P. E. Island		1,128 15	9,076 50	10,204 65	2,009 37	8,926 50	10,935 87	3,087 51	9,441 00	12,528 51	39
40	Quebec		3,512 26	27,952 50	31,464 76	3,404 61	29,879 00	33,283 61	3,587 98	28,319 75	31,907 73	40
41		Totals	64,119 39	97,478 00	161,597 39	60,685 59	100,218 00	160,903 59	60,595 17	103,102 75	163,757 92	41
		Less Refund			58 00							
					161,539 39							

COMPARATIVE STATEMENT of Fishing Bounties paid.

Number.	1888.			1889.			1890.		
	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.
	Amount.	Amount.		Amount.	Amount.		Amount.	Amount.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	217 01	1,153 50	1,370 51	182 31	1,044 00	1,226 31	234 58	799 00	1,033 58
2	.....	1,063 50	1,063 50	.....	1,012 00	1,012 00	13 75	882 00	895 75
3	423 33	3,618 00	4,041 33	307 47	3,470 00	3,777 47	455 19	3,896 00	4,351 19
4	85 50	.....	85 50	.....	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	1,696 68	1,749 50	3,446 18	1,721 61	1,608 00	3,329 61	1,381 05	1,727 00	3,108 05
7	1,289 71	8,274 50	9,564 21	974 57	8,093 00	9,067 57	500 44	8,349 00	8,849 44
8	3,809 99	7,806 00	11,615 99	4,367 08	7,789 00	12,156 08	3,950 57	9,268 00	13,218 57
9	1,247 90	5,432 00	6,679 90	1,037 96	5,170 00	6,207 96	732 67	5,094 00	5,826 67
10	123 45	272 50	395 95	112 50	212 00	324 50	147 38	361 00	508 38
11	13,893 81	3,794 00	17,687 81	17,184 42	3,577 00	20,761 42	15,957 09	4,606 00	20,563 09
12	.....	110 50	110 50	33 00	120 00	153 00	.....	146 00	146 00
13	1,495 82	1,174 00	2,669 82	1,524 06	1,499 00	3,023 06	942 00	1,825 00	2,767 00
14	2,390 65	8,108 50	10,499 15	2,825 92	6,534 00	9,359 92	2,963 30	8,008 00	10,971 30
15	5,193 59	3,842 50	9,036 09	4,127 80	4,240 00	8,367 80	3,087 27	4,680 00	7,767 27
16	36 00	4,963 50	4,999 50	21 00	5,030 00	5,051 00	.....	5,477 00	5,477 00
17	5,661 46	858 50	6,519 96	5,428 81	896 00	6,324 81	4,771 35	1,005 00	5,776 35
18	37,564 90	52,221 00	89,785 90	39,848 51	50,294 00	90,142 51	35,136 64	56,123 00	91,259 64
19	2,113 50	4,447 50	6,561 00	2,127 16	4,803 00	6,930 16	1,678 07	4,644 00	6,322 07
20	537 46	8,212 50	8,749 96	590 95	9,822 00	10,412 95	812 15	10,811 00	11,623 15
21	244 48	1,770 50	2,014 98	71 50	2,177 15	2,248 65	76 50	2,235 85	2,312 35
22	155 34	73 00	228 34	414 37	85 00	499 37	216 26	77 00	293 26
23	28 50	.....	28 50	21 00	7 00	28 00	.....	.....	.....
24	487 64	312 00	799 64	487 66	377 00	864 66	274 50	249 00	523 50
25	.....	72 50	72 50	.....	43 00	43 00	.....	37 00	37 00
26	3,566 92	14,888 00	18,454 92	3,712 64	17,314 15	21,026 79	3,057 48	18,053 85	21,111 33

from 1882 to 1892, inclusive—*Continued.*

1891.			1892.			Grand Total.	Number.
Vessels.	Boats.	Total.	Vessels.	Boats.	Total.		
Amount.	Amount.		Amount.	Amount.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
498 24	1,073 00	1,571 24	776 11	761 00	1,537 11	17,978 20	1
11 00	908 00	919 00	24 75	789 00	813 75	9,565 00	2
184 35	3,539 00	3,723 35	324 51	2,806 00	3,130 51	44,419 99	3
.....	.....	.....	.....	.....	.....	371 50	4
.....	.....	.....	.....	.....	.....	27 50	5
1,820 89	2,113 00	3,933 89	4,214 12	1,788 00	6,002 12	49,105 50	6
756 35	8,714 00	9,470 35	1,396 45	7,186 00	8,582 45	104,318 91	7
3,262 51	10,444 00	13,706 51	6,107 71	7,616 00	13,723 71	145,932 57	8
498 90	5,355 00	5,853 90	737 89	4,123 00	4,860 89	64,566 32	9
151 50	467 00	618 50	220 20	242 00	462 20	4,143 53	10
14,664 68	4,793 00	19,457 68	31,260 36	4,057 00	35,317 36	234,424 44	11
.....	228 00	228 00	.....	327 00	327 00	2,535 26	12
770 46	1,978 00	2,748 46	1,041 61	1,600 00	2,641 61	31,973 45	13
3,165 17	6,999 00	10,164 17	6,033 97	4,931 00	10,964 97	111,454 09	14
2,965 44	5,023 00	7,988 44	5,905 46	4,406 00	10,311 46	111,595 12	15
67 13	6,398 00	6,465 13	85 00	3,049 00	3,134 00	51,862 83	16
4,366 80	1,169 00	5,535 80	6,709 25	895 00	7,604 25	91,608 26	17
33,183 42	59,201 00	92,384 42	64,837 39	44,576 00	109,413 39	1,075,882 47	18
1,540 52	4,130 00	5,670 52	2,519 65	2,405 00	4,924 65	70,471 47	19
820 84	7,634 00	8,454 84	1,513 09	2,955 00	4,468 09	79,927 24	20
117 10	2,044 00	2,161 10	47 50	615 00	662 50	18,878 08	21
346 50	99 00	445 50	288 00	97 00	385 00	3,757 97	22
.....	31 00	31 00	.....	.....	.....	202 50	23
108 00	316 00	424 00	271 87	66 00	337 87	11,014 52	24
.....	49 00	49 00	71 50	21 00	92 50	918 50	25
2,932 96	14,303 00	17,235 96	4,711 61	6 159 00	10,870 61	185,170 28	26

COMPARATIVE STATEMENT of Fishing Bounties

Number.	1888.			1889.			1890.		
	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.	Vessels.	Boats.	Total.
	Amount.	Amount.		Amount.	Amount.		Amount.	Amount.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
27	654 06	2,067 00	2,721 06	1,043 02	6,672 00	7,715 02	713 09	4,837 00	5,550 09
28	782 00	3,826 50	4,608 50	651 25	4,114 00	4,765 25	633 93	3,941 00	4,574 93
29	180 90	1,582 50	1,763 40	69 26	1,445 00	1,514 26	63 30	1,498 00	1,561 30
30	1,616 96	7,476 00	9,092 96	1,763 53	12,231 00	13,994 53	1,410 32	10,276 00	11,686 32
31	.....	9,891 50	9,891 50	.....	10,689 00	10,689 00	51 76	11,894 00	11,945 76
32	1,098 05	16,527 50	17,625 55	856 34	16,597 00	17,453 34	376 51	16,914 00	17,290 51
33	.....	27 50	27 50	.....	160 00	160 00	.....	145 00	145 00
34	1,573 20	3,741 00	5,314 20	1,600 87	3,459 50	5,060 37	1,287 45	3,542 00	4,829 45
35	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	2,671 25	30,187 50	32,858 75	2,457 21	30,905 50	33,362 71	1,715 72	32,495 00	34,210 72

RECAPITU

37	37,564 90	52,221 00	89,785 90	39,848 51	50,294 00	90,142 51	35,136 64	56,123 00	91,259 64
38	3,566 92	14,888 00	18,454 92	3,712 64	17,314 15	21,026 79	3,057 48	18,053 85	21,111 33
39	1,616 96	7,476 00	9,092 96	1,763 53	12,231 00	13,994 53	1,410 32	10,276 00	11,686 32
40	2,671 25	30,187 50	32,858 75	2,457 21	30,905 50	33,362 71	1,715 72	32,495 00	34,210 72
41	45,420 03	104,772 50	150,192 53	47,781 89	110,744 65	158,526 54	41,320 16	116,947 85	158,268 01
	Less Refund. . . .		7 00				Less Refund		27 00
			150,185 53						158,241 01

paid, from 1882 to 1892, inclusive—*Concluded.*

1891.			1892.			Grand Total.	Number.
Vessels.	Boats.	Total.	Vessels.	Boats.	Total.		
Amount.	Amount.		Amount.	Amount.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
528 03	5,526 00	6,054 03	1,102 30	3,364 00	4,446 30	53,627 95	27
484 14	4,454 00	4,938 14	1,276 85	2,673 00	3,949 85	50,993 07	28
99 13	1,680 00	1,779 13	250 64	1,116 00	1,366 64	20,294 01	29
1,111 30	11,660 00	12,771 30	2,629 79	7,153 00	9,782 79	124,915 03	30
52 13	11,605 00	11,657 13	25 00	6,449 00	6,474 00	95,117 89	31
371 25	17,762 00	18,133 25	363 25	16,692 00	17,055 25	184,404 12	32
.....	399 00	399 00	.....	286 00	286 00	1,017 50	33
927 79	3,390 00	4,317 79	1,983 10	3,896 00	5,879 10	61,732 98	34
.....	.....	.....	.....	.....	.....	15 00	35
1,351 17	33,156 00	34,507 17	2,371 35	27,323 00	29,694 35	342,287 49	36

LATION.

33,183 42	59,201 00	92,384 42	64,837 39	44,576 00	109,413 39	1,075,882 47	37
2,932 96	14,303 00	17,235 96	4,711 61	6,159 00	10,870 61	185,170 28	38
1,111 30	11,660 00	12,771 30	2,629 79	7,153 00	9,782 79	124,915 03	39
1,351 17	33,156 00	34,507 17	2,371 35	27,323 00	29,694 35	342,287 49	40
38,578 85	118,320 00	156,898 85	74,550 14	85,211 00	159,761 14	1,728,255 27	41
Less Refund		7 00	Less Refund.....		9 00	108 00	
		156,891 85			159,752 14	1,728,147 27	

COMPARATIVE STATEMENT by Provinces for the Years 1882 to 1892, inclusive, showing :—
(1) Total number of Fishing Bounty claims received and paid by the Department of Marine and Fisheries.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.
1882.....	6,730	6,613	1,257	1,142	1,169	1,100	3,162	3,117	12,318	11,972
1883.....	7,171	7,076	1,693	1,579	1,138	1,106	3,602	3,325	13,604	13,086
1884.....	7,007	6,930	1,252	1,224	923	885	3,470	3,429	12,652	12,468
1885.....	7,646	7,599	1,609	1,588	1,117	1,025	3,943	3,912	14,315	14,124
1886.....	7,639	7,702	1,767	1,763	1,131	1,080	4,275	4,355	14,812	14,900
1887.....	8,262	8,227	1,975	1,958	1,201	1,126	4,138	4,105	15,576	15,416
1888.....	8,481	8,429	2,065	2,026	1,153	884	4,328	4,310	16,027	15,599
1889.....	8,816	8,523	2,428	2,392	1,211	1,511	4,664	4,652	17,119	17,078
1890.....	9,337	9,429	2,522	2,469	1,352	1,257	4,860	4,804	18,071	17,959
1891.....	10,242	10,063	2,831	2,084	1,482	1,446	5,108	4,913	19,663	18,506
1892.....	8,272	8,186	1,067	1,001	1,065	1,051	4,425	4,204	14,829	14,442
Totals.....	89,603	88,777	20,466	19,226	12,942	12,451	45,975	45,126	168,986	165,550

(2) NUMBER of vessels, tonnage and number of men entitled to bounty in each year.

YEAR.	NOVA SCOTIA.			NEW BRUNSWICK.			P. E. ISLAND.			QUEBEC.			TOTAL.		
	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.	No. of Vessels.	Ton- nage.	No. of Men.
1882.....	588	22,841	5,343	120	2,171	531	15	389	74	63	2,210	538	786	27,611	6,486
1883.....	700	29,788	6,288	126	2,102	496	16	450	66	62	2,236	443	904	34,576	7,243
1884.....	700	29,828	6,327	139	2,289	560	16	582	92	56	1,965	382	911	34,664	7,361
1885.....	629	27,709	5,897	128	2,120	496	19	597	113	55	1,791	317	831	32,217	6,823
1886.....	562	25,375	5,022	145	2,628	520	32	1,071	215	52	1,730	320	791	30,804	6,077
1887.....	566	24,520	4,900	154	2,889	563	38	1,677	338	54	1,883	331	812	30,969	6,135
1888.....	589	26,008	5,450	150	2,545	544	37	1,245	249	51	1,842	388	827	31,640	6,631
1889.....	597	27,123	5,684	153	2,590	565	35	1,274	239	48	1,729	330	833	32,716	6,818
1890.....	540	23,955	4,935	133	2,129	447	32	1,002	203	34	1,182	220	739	28,268	5,805
1891.....	527	23,780	4,618	124	2,051	411	27	778	155	27	924	168	705	26,533	5,352
1892.....	507	22,279	4,611	108	1,683	343	30	983	139	23	803	159	668	25,748	5,252
Totals.....	6,505	282,206	59,025	1,480	23,199	5,476	297	10,048	1,883	525	18,295	3,599	8,807	335,746	69,983

(3) NUMBER of Boats among which Bounty was distributed, and number of men engaged in boat fishing receiving Bounty.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.
1882.....	6,043	12,130	1,024	2,530	1,087	3,070	3,071	5,716	11,225	23,446
1883.. . . .	6,458	13,553	1,453	3,309	1,098	3,106	3,266	6,188	12,275	26,156
1884.....	6,257	12,669	1,086	2,505	869	2,346	3,344	6,416	11,556	23,936
1885.....	6,970	13,396	1,460	3,254	1,006	2,606	3,857	7,485	13,293	26,741
1886.....	7,140	13,351	1,618	3,567	1,048	2,547	4,303	7,981	14,109	27,446
1887... . .	7,662	13,997	1,804	3,994	1,088	2,711	4,051	7,550	14,605	28,252
1888.....	7,840	14,115	1,876	4,148	797	2,141	4,259	7,852	14,772	28,256
1889.....	7,926	14,118	2,237	5,032	1,475	3,568	4,602	8,807	16,240	31,525
1890.....	8,886	15,738	2,324	5,242	1,192	3,024	4,766	9,241	17,168	33,245
1891.....	9,525	16,552	1,928	4,126	1,383	3,427	4,865	9,432	17,701	33,507
1892.....	7,679	12,307	893	1,765	1,021	2,047	4,181	7,693	13,774	23,812
Totals....	82,386	151,926	17,703	39,472	12,064	30,593	44,565	84,331	156,718	306,322

(4) TOTAL Number of men receiving Bounty in each year.

YEAR.	NOVA SCOTIA.	NEW BRUNSWICK	P. E. ISLAND.	QUEBEC.	TOTAL.
	No. of Men.	No. of Men.	No. of Men.	No. of Men.	
1882....	17,473	3,061	3,144	6,254	29,932
1883.. . . .	19,791	3,805	3,172	6,631	33,399
1884.....	18,996	3,065	2,438	6,798	31,297
1885.....	19,293	3,750	2,719	7,802	33,564
1886.....	18,373	4,087	2,762	8,301	33,523
1887.....	18,897	4,557	3,049	7,884	34,387
1888.....	19,565	4,692	2,390	8,240	34,887
1889.....	19,802	5,597	3,807	9,137	38,343
1890.....	20,673	5,689	3,227	9,461	39,050
1891.....	21,170	4,537	3,582	9,570	38,859
1892.....	16,918	2,108	2,186	7,852	29,064
Totals.....	210,951	44,948	32,476	87,930	376,305

(5) TOTAL annual payments of Fishing Bounty.

YEAR.	Nova Scotia.	New Brunswick.	P. E. Island.	Quebec.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1882.....	106,098 72	16,997 00	16,137 00	33,052 75	172,285 47
1883.....	89,432 50	12,395 20	8,577 14	19,940 01	130,344 85
1884.....	104,934 09	13,576 00	9,203 96	28,004 93	155,718 98
1885.....	103,999 73	15,908 25	10,166 65	31,464 76	161,539 39
1886.....	98,789 54	17,894 57	10,935 87	33,283 61	160,903 59
1887.....	99,622 03	19,699 65	12,528 51	31,907 73	163,757 92
1888.....	89,778 90	18,454 92	9,092 96	32,858 75	150,185 53
1889.....	90,142 51	21,026 79	13,994 53	33,362 71	158,526 54
1890.....	91,235 64	21,108 33	11,686 32	34,210 72	158,241 01
1891.....	92,377 42	17,235 96	12,771 30	34,507 17	156,891 85
1892.....	109,410 39	10,864 61	9,782 79	29,694 35	159,752 14
Totals.....	1,075,821 47	185,161 28	124,877 03	342,287 49	1,728,147 27

DETAILED STATEMENT of Fishing Bounties paid to **Vessels**, for the year 1892.

PROVINCE OF NOVA SCOTIA.

ANNAPOLIS COUNTY.

* This denotes that some of the crew did not comply with the regulations, or are debarred from participation in the bounty for being parties to fraud, and are not included in the column for crew.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
94,704	Charles Haskell....	Digby	67	David Hayden, M.O.	Thornville.....	*11	190 25
85,684	Constitution.....	do	28	Stephen Haynes, M.O.	Victoria Beach..	10	84 00
94,700	Franklin S. Schenck	do	44	Wm. McGrath, M.O.	Thornville.....	*11	126 50
80,001	Florence	St. John, N.B.	15	Edward Quinlan....	Victoria Vale....	* 3	36 00
83,461	Josie L. Day.....	Digby	16	Wm. Taylor, M.O....	Victoria Beach..	* 4	37 72
94,709	Jennie B. Thomas..	do	52	John Apt, M.O.....	Thornville.....	*10	143 00
88,685	Ladora	St. John, N.B.	12	Stephen Baker	Margaretsville..	* 1	24 00
75,594	Lizzie G.....	Digby	16	Edward Kearns, M.O.	Victoria Beach..	3	48 00
83,253	Rescue	Annapolis	17	Josiah Burrell.....	Clementsport....	* 7	51 00
94,756	Sarah E. Ellis.....	St. John, N.B.	12	Jno. Magranahan....	Margaretsville..	* 1	35 63

ANTIGONISH COUNTY.

96,787	Benecia Boy.....	Halifax.....	11	Lawrence Hylan.....	Harb'rau Bouche	* 1	24 75
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CAPE BRETON COUNTY.

88,507	Belle of Rome....	Sydney	14	C. W. Mann.....	Gabarus.....	* 4	35 00
92,612	Betsy Jane.....	do	11	Sam'l Moore	Little Bras d'Or.	3	33 00
92,613	Bessie	do	20	Wm. J. Christie....	do	* 2	38 58
74,039	James Henry.....	do	18	Peter Devoe.....	do	7	54 00
75,577	Mary Ann Bell....	Lunenburg	33	J. Arseneault and V,			
				Theriacault	do	* 6	91 93
92,600	Merit.	Sydney	13	Alex. Leblanc	do	6	39 00
77,857	Sailors Bride....	do	11	Edw'd O'Bryan.....	do	3	33 00

DIGBY COUNTY.

94,708	Ann Eliza.....	Digby	62	Jno. W. Hayden, M.O.	Digby	*11	166 08
94,696	Annie M. Sproule..	do	70	Jno. W. Sproule, M.O.	do	*12	195 00
83,258	Alfred.....	Annapolis	22	Edwin Hains, M.O..	Freeport.....	8	66 00
75,733	Alfred.....	Yarmouth.....	46	Burton Outhouse, M.O.	Tiverton.....	11	138 00
90,660	Alice May.....	do	18	Bradish Bailey, M.O.	Westport.....	7	54 00
88,267	Bessie May.....	St. John, N.B.	23	Geo. McDormand....	do	8	69 00
94,698	Carrie H	Digby	20	Augustus Haycock...	do	7	60 00
74,331	Condor.....	Yarmouth.....	11	Howard Titus.....	do	5	33 00
75,711	Dove	do	19	Jos. Ossinger, M.O.	Tiverton.....	* 6	49 88
94,707	Ernest F. Norwood.	Digby	79	Ansel Snow.....	Digby	*10	192 60
90,662	Edward A. Horton.	Digby	67	Joseph E. Snow, M.O.	Digby	*13	193 83
80,797	Ella H	do	14	Jno. Whiteneck.....	Freeport.....	5	42 00
85,683	Edith L	do	16	R. W. Ford, M.O....	Westport.....	* 1	28 00
77,740	Elmer.....	do	15	James Gower.....	do	5	45 00
75,757	Etta	Yarmouth.....	17	J. W. C. Webber....	do	* 5	46 75
80,798	Freddie G.....	Digby	18	George Gower, M.O.	do	* 5	49 50
77,963	Freeman Colgate..	St. Andrews, N.B.	25	F. B. Lent, M.O....	do	10	75 00
74,339	Fairy Queen.....	Yarmouth.....	13	Wallace Coggins	do	6	39 00
75,601	Flash.....	Digby	10	James A Peters.....	do	4	30 00
83,260	Gazelle	Annapolis	20	D. & O. Sproule....	Digby	* 6	55 72
94,706	George J. Tarr....	Digby	61	Jno. S. Hayden, M.O.	do	* 7	155 55

DETAILED STATEMENT of Fishing Bounties paid to **Vessels**, &c.—Nova Scotia—*Con.*DIGBY COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
90,436	Genesta	Barrington.....	32	Geo. Denton, M.O. ...	Westport.	10	96 00
80,800	Helen Maud.....	Digby	20	C. McDormand, M.O. ...	do	7	60 00
100,064	Isma.	St. John, N.B. ...	31	Chas. Hicks & Sons. ...	Westport.	* 8	87 84
75,865	Ida Peters	do	32	Frank Blackford, M.O.	Sandy Cove.	9	96 00
94,693	John H. Kennedy. ...	Digby.	54	William Snow	Digby	14	162 00
97,026	James Farnham. ...	Yarmouth	31	Margaret Hersey, M.O.	Sandy Cove.	* 5	69 75
80,604	Jennie C.	do	16	Chas Hicks & Sons	Westport.	6	48 00
80,786	Lizzie P.	Digby	12	Nelson Thurber.	Freeport.	5	36 00
85,690	Lora T.	do	15	Wm. Titus, M.O.	do	7	45 00
85,685	L. M. Ellis.	do	35	Holland Outhouse.	Tiverton.	10	105 00
80,881	Lena May	St. Andrews, N.B.	18	Amos H. Outhouse.	do	6	54 00
94,701	Mary E. Whorf.	Digby	77	Ho'ard Anderson, M.O.	Digby.	*15	223 79
97,022	M. & L. Chase.	do	46	Gilbert Ellis, M.O.	do	* 8	115 00
80,794	Minnie C.	do	18	Chas. H. Bailey, M.O.	Westport.	6	54 00
85,682	Malapert	do	23	Ainsley Titus.	do	8	69 00
94,825	On Time.	Weymouth	19	Charles Leblanc, M.O.	Church Point. ...	* 5	52 25
75,714	Prince	Yarmouth	10	Jeff. Stephens, M.O. ...	Freeport.	5	30 00
90,873	Primrose	do	34	Geo. Coggins, M.O.	Westport.	9	102 00
94,703	Phebe and Emma Small.	Digby	70	Wm. H. Melancon, M.O.	Weymouth.	* 7	150 96
75,864	Roving Lizzie.	Weymouth	11	F. P. Small.	East Ferry.	* 2	23 10
75,547	River Rose	Barrington.	13	Benj. Leblanc.	Meteghan	* 1	22 75
83,132	Restless	Digby	25	Jackson Coggins	Westport.	8	75 00
85,558	S. A. Crowell.	Yarmouth	23	Wallace Gower	do	8	69 00
80,784	Silver Cloud.	Digby	41	Handford Outhouse.	Tiverton.	11	123 00
75,726	Thrush	Yarmouth	13	Handley Outhouse.	do	7	39 00
94,694	Utah & Eunice.	Digby	33	Edwin Hains, M.O.	Freeport.	8	99 00
37,282	Victoria.	do	29	Hy. Outhouse, M.O.	Tiverton.	10	87 00
75,595	West Wind	do	25	Syda & Cousins.	Digby.	* 8	67 50
88,264	Walter J. Clarke. ...	St. John, N.B. ...	20	Wm. E. Gilliatt, M.O.	Sandy Cove.	* 3	42 87
74,317	Willie	Yarmouth.	21	C. Titus, M.O.	Westport.	8	63 00
85,559	Willie F.	do	12	E. C. Thurber, M.O.	do	6	36 00
72,980	Wave	Digby	11	Alon. Morehouse, M.O.	Little River.	* 3	26 40

GUYSBOROUGH COUNTY.

90,844	Armada	Guysboro'	25	Wm. O'Hara, M.O.	Canso	* 6	69 65
41,771	Atalia	do	34	T. H. Peeples, M.O.	Pirate Harbour. ...	4	102 00
61,629	Carrie R.	do	17	Albert Pride, M.O.	Sonora	6	51 00
73,029	F. P. T.	Halifax	41	C. A. Murdoch	Sherbrooke.	6	123 00
80,999	Guardian Angel.	Guysboro'	20	Jos. Fongère.	Larry's River.	6	60 00
96,766	Golden Rule	Pt. Hawkesbury	42	Osborne Maguire.	Pirate Harbour. ...	5	126 00
85,724	Jumbo	Halifax	29	Henry Linden	Canso	* 5	79 75
74,355	La Mode	Pictou	26	John O'Neil, M.O.	Auld's Cove.	4	78 00
74,115	Lord Eldon.	Guysboro'	58	Jas. E. Hadley	Guysboro'.	* 9	158 19
69,964	Lizzie A.	Pt. Hawkesbury	20	Jno. F. & A. H. Reeves	Pirate Harbour. ...	4	60 00
69,141	Mary Elizabeth.	Halifax	16	Hubert Boudrot	Port Félix	* 3	36 00
94,993	Onward	Charlottetown, P. E. I.	15	H. Horton & J. Ludington.	New Harbour.	* 2	33 76
80,970	Orion	Halifax	23	E. B. Pelrine.	Larry's River.	6	69 00
83,838	Ocean Bride.	Pt. Hawkesbury	23	Jos. O'Neil, M.O.	Auld's Cove.	* 4	62 10
75,892	Peter Mitchell.	do	26	Wm. P. Power.	Pirate Harbour. ...	5	78 00
74,018	Sunbeam	Halifax.	70	Lewis E. Hart.	Guysboro'	5	210 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—*Con.*

HALIFAX COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							£ cts.
77,826	Abbie G.	Halifax.	31	Walter Glawson.	Pleasant Harb'ur	6	93 00
61,625	Alpha.	do.	18	Lindsay Hubley	French Village. *	4	48 60
57,727	Agnes.	do.	21	John Hayes.	Herring Cove. ...	3	63 00
74,020	Addie.	do.	16	Dennis Fagan.	Ketch Harbour	3	48 00
75,848	Annie Gaetz.	do.	36	Jno. G. Weston.	East Jeddore. ... *	8	93 27
90,721	Brilliant Star.	do.	36	P. Hartlin, sr., & Jno. Hartlin.	do.	10	108 00
94,662	Bessie Florence.	do.	12	Chas. Twohig.	Pennant.	* 2	30 00
73,969	Bertha E.	do.	21	Chas. Fader, sen.	St. Margaret's Bay	4	63 00
90,496	Black Prince.	do.	18	J. W. Slaunwhite.	Terence Bay ...	3	54 00
74,071	Condor.	do.	20	Geo. Julien <i>et al.</i>	W. Chezzetcook. ...	4	60 00
85,655	Daisy.	do.	16	J. A. Wambolt & H. Richardson.	Indian Harbour. ...	5	48 00
85,663	Daring.	do.	18	Chas. Slaunwhite, sen.	Terence Bay. ...	3	54 00
92,564	Evangeline.	do.	23	Daniel Baker.	Jeddore.	6	69 00
96,785	Eva M. B.	do.	45	F. Bonang <i>et al.</i>	W. Chezzetcook. ... *	7	103 86
80,832	Ella May.	Lunenburg.	16	Amos Murphy.	French Village. ... *	2	40 00
90,481	Ella D.	Halifax.	32	Arch. Darrah, sen.	Herring Cove. ...	6	96 00
100,220	E. J. Smith.	do.	11	Jno. J. Smith.	Sambro.	3	33 00
88,357	Floresta.	do.	57	Chas. Nieforth <i>et al.</i>	Seaforth.	15	171 00
88,227	Fleetwing.	do.	32	Thos. Lapierre <i>et al.</i>	W. Chezzetcook. ...	11	96 00
42,276	Foaming Billow.	do.	66	M. B. Wrayton.	Halifax.	6	198 00
86,644	Flora.	do.	42	Patrick Scallion.	Herring Cove. ...	7	126 00
83,180	Friend.	do.	17	S. P. Slaunwhite.	Terence Bay. ...	3	51 00
55,836	Frank Newton.	Sydney.	40	Theodore Conrod.	Sheet Harbour. ...	7	160 00
96,782	Glide.	Halifax.	10	S. H. Garrison.	Peggy's Cove. ...	2	30 00
94,963	Golden Seal.	Lunenburg.	32	C. W. Hart.	Sambro.	6	96 00
88,220	Grandee.	Halifax.	14	J. P. Slaunwhite.	Terence Bay. ...	3	42 00
94,979	Gleaner.	do.	57	Lawson B. Corkum <i>et al.</i>	Jeddore.	*14	160 30
69,097	Highland Jane.	do.	32	George Hartlin.	East Jeddore. ... *	8	90 67
77,786	Hesperus.	do.	17	Joseph Reyno, sen.	Herring Cove. ...	3	51 00
83,134	Infant.	Lunenburg.	15	John Reyno.	do.	* 3	36 00
83,306	Iona.	Halifax.	26	A. Sullivan.	do.	5	78 00
100,212	James R.	do.	51	C. & A. Mitchell.	East Jeddore. ...	14	153 00
96,797	Laura Phoebe.	do.	18	John Kent.	Musquodoboit Harbour.	4	54 00
96,789	Lydia A. Mason.	do.	39	Peter Mason <i>et al.</i>	Tangier.	8	117 00
94,665	Louis Luby.	do.	41	Wm. Lapierre <i>et al.</i>	W. Chezzetcook. ... *	13	118 61
75,605	Little Annie.	Digby.	27	Mathew Lynch.	Ferguson's Cove. ...	6	81 00
94,661	L. C. Tough.	Halifax.	12	John E. Tough.	Pennant.	3	36 00
96,790	Lillie C.	do.	12	John Selig.	East Dover.	3	36 00
100,217	Lydia E.	do.	10	E. C. Arnold.	East Jeddore. ... *	2	22 50
37,428	Medway Belle.	do.	50	James Smith, sen.	E. Chezzetcook. ... *	4	117 87
92,568	Mary Kate.	do.	13	Wm. Geddes.	Sober Island. ... *	3	34 13
85,385	Minne M.	do.	27	J. D. Gaetz and Wm. G. Nieforth.	Seaforth.	* 8	76 50
96,805	Maggie May.	do.	62	Jeremiahillis <i>et al.</i>	W. Chezzetcook. ...	15	186 00
92,330	Mary E. Leslie.	Liverpool.	94	James Fraser.	Halifax.	*21	234 55
85,664	Mary E.	Halifax.	14	Andrew Twohig.	Pennant.	3	42 00
80,841	Nina.	do.	13	Wm. E. Murphy.	Owls Head.	* 3	34 13
83,107	North Star.	do.	26	Thos. & Simon Nieforth.	Seaforth.	8	78 00
94,667	Nettie M. G.	do.	32	S. Hubly & C. Garrison.	Indian Harbour. ...	9	96 00
85,665	Nellie D.	do.	12	Daniel Smith.	Sambro.	4	36 00
64,018	Ocean Bride.	do.	23	Jos. H. Doyle.	West Jeddore. ...	6	69 00
92,571	Primrose.	do.	14	Alex. Slaunwhite.	Terence Bay. ...	3	42 00
96,806	Prising Sun.	do.	28	Geo. Julien.	W. Chezzetcook. ...	6	84 00
57,688	Riverdale.	do.	48	Geo. E. Boak.	Halifax.	(a)	72 00
53,551	Roving Bird.	do.	24	John Brown.	Herring Cove. ...	4	72 00
92,575	Robinetta.	do.	14	Michael Carroll.	do.	4	42 00
77,787	Rescue.	do.	20	Henry Fader.	East Dover.	3	60 00
100,474	R. Beatrice.	Lunenburg.	19	James Morash, jun.	West Dover. ... *	2	42 74

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—*Con.*HALIFAX COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
97,042	Sea Bird.....	Halifax.....	17	L. Murphy & S. Monk	East Ship Harb.	* 4	45 90
53,600	Starlight.....	do.....	29	T. Cooper & H. Hartlin	East Jeddore....	8	87 00
74,087	Sea Gem.....	do.....	30	James Jennex....	do.....	* 5	73 13
94,675	Success.....	do.....	16	James Conrod....	Spry Bay.....	* 2	33 60
37,579	Safe Guide.....	do.....	36	W. C. Henley....	do.....	7	108 00
64,869	Sarah L. Oxner...	do.....	34	Edward Hayes....	Herring Cove...	8	102 00
100,218	Sarah M. W.....	do.....	14	Hezekiah Wambolt.	Indian Harbour..	5	42 00
75,833	Twilight.....	do.....	14	Eli Baker.....	East Jeddore....	6	42 00
77,836	T. W. Smith.....	do.....	35	Chas. Beaver.....	Spry Bay.....	7	105 00
90,490	T. W. Wolfe.....	do.....	31	Henry Lapierre <i>et al.</i>	W. Chezzetcook..	9	93 00
90,482	Two Forty.....	do.....	18	Mrs. E. R. Forsyth..	Halifax.....	* 3	47 25
100,154	Triton.....	Lunenburg.....	60	Jno. Wm. Wentzel ..	do.....	15	180 00
90,485	Violet West.....	Halifax.....	36	Thos. A. Gaetz <i>et al.</i>	Seaforth.....	11	108 00
88,609	Vergesco.....	Lunenburg.....	57	Geo. E. Boak.....	Halifax.....	(a)	85 50
96,781	Venture.....	Halifax.....	43	Edward Dempsey...	Herring Cove....	* 5	110 58
90,723	Winnie L.....	do.....	31	J. Gaetz <i>et al.</i>	Seaforth.....	10	93 00
88,228	Welcome.....	do.....	33	E. J. Nieforth <i>et al.</i>	do.....	10	99 00
83,042	Western Belle...	do.....	23	Jno. Thomas.....	Herring Cove....	5	69 00
92,578	Willetta.....	do.....	12	Joseph Gray.....	Sambro.....	3	36 00
61,904	Water Lily.....	do.....	14	Isaac Morash.....	West Dover.....	2	42 00
85,378	Zephyr.....	do.....	16	Robt. Slaunwhite...	Terence Bay....	3	48 00

(a) The crew not Canadians. + Owner not paid; debarred.

INVERNESS COUNTY.

90,739	Arizona.....	Pt. Hawkesbury	49	Wm. H. Paint.....	Pt. Hawkesbury	6	147 00
71,302	Alice.....	Charlottetown, P. E. I.	10	Lazare Lelievre....	Eastern Harbour	5	30 00
96,765	Granada.....	Pt. Hawkesbury	58	Jas. Macdonald....	West Bay.....	* 11	166 75
38,468	Hector.....	Arichat.....	35	Jas. C. Skinner....	Port Hastings...	4	105 00
96,763	Lelia Linwood...	Pt. Hawkesbury	67	Wm. H. Paint.....	Pt. Hawkesbury	* 9	175 89
69,125	May Flower.....	Halifax.....	11	Hyacinthe Chiasson..	Eastern Harbour	6	33 00
96,761	Quick.....	Pt. Hawkesbury	13	Frederick Burns...	do.....	4	39 00
83,094	Saint Mary.....	do.....	15	Patrick Gallant....	East Margaree...	* 5	41 25

KING'S COUNTY.

74,308	Bald Eagle.....	Yarmouth.....	14	Leonard Houghton...	Hall's Harbour..	3	42 00
92,604	Maudie.....	Sydney.....	26	John Cook, M.O....	Harbourville...	* 3	58 50
80,815	Rebecca W.....	Windsor.....	27	Fred. Parker.....	Hall's Harbour..	* 2	56 70
57,109	Sea Bird.....	Yarmouth.....	21	L. R. Morris.....	Chipmans Brook	2	63 00

LUNenburg COUNTY.

90,866	Alice.....	Lunenburg.....	12	Solmon Richard, M.O..	La Have.....	3	36 00
94,790	Abana.....	do.....	85	John M. Ritcey.....	Ritcey's Cove....	13	240 00
100,489	Algoma.....	do.....	56	Jeffrey Publicover, M.O.	La Have.....	10	168 00
94,965	Alice B.....	do.....	66	Adnah Burns, M.O...	do.....	12	198 00
100,160	Amelia Corkum...	do.....	99	Charles Rafuse, M.O..	West La Have...	14	240 00
94,961	Altona.....	do.....	67	Enm'l. Zeller, M. O..	Lunenburg.....	13	201 00
94,778	Argosy.....	do.....	83	Charles Smith, M.O...	do.....	14	240 00
96,831	Argo.....	do.....	42	G. A. Parker, M.O...	do.....	* 9	119 70
100,472	Arcana.....	do.....	86	Alex. Knickle, M.O...	do.....	14	240 00
94,873	Alaska.....	do.....	87	Benj. Anderson, M.O..	do.....	* 12	222 86
100,170	Atlanta.....	do.....	96	Freem'n Anderson, M.O	do.....	14	240 00
100,163	Beauty.....	do.....	65	Wm. Sarty, M.O.....	La Have.....	10	195 00
94,651	Bessie A.....	do.....	99	Murd'k McGregor, M.O	do.....	15	240 00
96,828	Bonanza.....	do.....	86	Charles Silver, M.O...	Lunenburg.....	14	240 00
94,782	Bona Fides.....	do.....	90	J. Jos. Rudolph, M.O.	do.....	14	240 00
96,823	Burnham H.....	do.....	87	Benj. Morash, M.O...	do.....	14	240 00
92,637	Bertie C. H.....	do.....	87	Thos. Hamm, M.O....	do.....	14	240 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—Con.

LUNENBURG COUNTY—Continued.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
94,645	C. A. Chisholm....	Lunenburg	81	Abraham Ernst, M.O.	Mahone Bay....	12	240 00
94,658	C. A. Ernst.....	do	57	do	do	11	171 00
100,159	C. U. Mader.....	do	87	C. U. Mader, M.O.	do	12	240 00
85,642	Charlotte E. C....	do	80	do	do	12	240 00
94,643	Carrie M. C.....	do	39	Joshua Coolen, M.O.	Fox Point.....	9	117 00
96,825	Cecelia W.....	do	41	Robt. Walfield, M.O.	La Have	9	123 00
88,348	Cymbeline.....	do	96	Wm. Sarty, M.O.	do	13	240 00
90,856	Cleta.....	do	90	W. N. Reinhardt, M.O	do	14	240 00
90,824	Ceto.....	do	95	Simon Parks, M.O.	do	14	210 00
100,482	Como.....	do	46	Joshua Oakes.....	do	10	138 00
97,081	Carrie.....	do	99	Albert McKean, M.O.	do	15	240 00
97,084	Calla Lily.....	do	62	Henry Hirtle, M.O....	do	11	186 00
94,646	Carrie C. W.....	do	92	Martin Westaver, M.O.	Martin's Brook..	14	240 00
100,483	Curfew.....	do	49	John D. Sperry, M.O.	Petit River.....	11	147 00
92,622	Coronet.....	do	115	A. H. Zwicker, M.O.	Lunenburg	14	240 00
90,869	Clara E. Mason....	do	82	David Smith, M.O.	do	14	240 00
90,857	Capio.....	do	72	G. N. C. Hawkins, M.O.	do	12	216 00
96,835	Cora L.....	do	99	Rufus Conrad, M.O.	La Have	14	240 00
94,652	Cashier.....	do	106	W. N. Reinhardt.....	do	15	240 00
97,085	D. Cronan.....	do	59	Henry Schnare, M.O.	Mahone Bay....	12	177 00
88,355	D. A. Mader.....	do	85	C. U. Mader, M.O.	do	13	240 00
85,344	Donzella.....	do	118	Adam Selig, M.O.	Voglers Cove....	14	240 00
96,826	Director.....	do	87	David Smith, M.O.	Lunenburg	14	240 00
97,089	Dictator.....	do	87	S. Watson Oxner, M.O.	do	*12	210 00
83,308	Ella.....	Liverpool	10	Jenniss C. Hanson....	Mahone Bay....	* 1	22 50
85,731	Eva L. H.....	Lunenburg	62	Jacob Hiltz, M.O.	do	8	186 00
94,650	Elsie.....	do	47	John Schmeisser, M.O.	La Have	*10	134 60
96,821	Edgar T. Richard..	do	55	Elias Richard, sr., M.O.	La Have	11	165 00
94,659	Enterprise.....	do	84	Albt. Cleversey, M.O.	do	*13	231 43
90,584	Eldora.....	do	75	Jno. Creaser.....	Ritcey's Cove....	12	225 00
100,151	Erminie.....	do	91	Wm. Young, M.O.	Lunenburg	14	240 00
75,569	Empress.....	do	47	Simon Pentz, M.O.	La Have	9	141 00
100,481	Florence.....	do	29	W. A. Pickels, M.O.	Mahone Bay....	* 5	74 58
94,777	Florence M. Smith.	do	98	Ben. Anderson, M.O.	Lunenburg	14	240 00
94,656	Florin.....	do	58	Robt. Dawson, M.O.	Bridgewater....	12	174 00
92,638	Florence M.....	do	83	Alex. Silver, M.O.	Lunenburg	12	240 00
80,829	Florence B.....	do	32	John W. Pearl.....	do	* 3	72 00
100,478	Gadiola.....	do	52	Kenneth Silver, M.O.	La Have	11	156 00
100,480	Gallant.....	do	57	Elias Richard, sr., M.O.	do	*11	163 88
90,862	Grenada.....	do	92	Reuben Romkey.....	do	*12	230 77
97,088	Glendale.....	do	38	Charles Bell, M.O.	do	8	114 00
97,083	Garland.....	do	51	Jno. D. Sperry, M.O.	Petit River.....	8	153 00
100,488	Garnet.....	do	56	Alvin Creaser, M.O.	Ritcey's Cove....	12	168 00
94,773	Galatea.....	do	98	Jno. B. Young, M.O.	Lunenburg	14	240 00
90,582	G. A. Smith.....	do	95	Wm. Young, M.O.	do	*13	231 43
96,836	Gleaner.....	do	86	Wm. C. Acker, M.O.	do	14	240 00
100,158	H. N. Gardner.....	do	48	Clarence Adams, M.O.	La Have	12	144 00
90,859	Hector W. McG...	do	99	Murdoch MacGregor, M.O.	do	15	240 00
90,825	Henry N. Batchelder	Port Medway...	99	Sam. E. Teel, M.O.	Voglers Cove....	*17	233 34
100,161	Hilda Maud.....	Lunenburg	37	Adam Selig, M.O.	do	* 9	105 45
100,156	Hustler.....	do	44	L. B. Currie, M.O.	West Dublin ..	9	132 00
96,837	Irvin G.....	do	80	Henry Gerhardt, M.O.	Lunenburg	14	240 00
94,970	Joseph O.....	do	53	Thomas Oakley, M.O.	La Have	10	159 00
94,789	Joseph McGill....	do	99	Henry Ritcey, M.O.	Ritcey's Cove....	14	240 00
74,019	Jewel.....	do	52	Leonard Young, M.O.	Lunenburg	10	156 00
96,830	J. A. Silver.....	do	91	Charles L. Silver, M.O	do	14	240 00
100,164	J. H. Ernest.....	do	97	S. Watson Oxner.....	do	14	240 00
94,785	J. C. Schwartz....	do	89	Chas. Hewitt, M.O.	do	14	240 00
85,723	Jessie A. Loye....	do	99	James A. Hirtle, M.O.	do	14	240 00
94,654	J. W. Geldert....	do	88	Jas. W. Geldert, M.O.	do	16	240 00
92,639	Jennie Miller.....	do	83	Henry Adams, M.O.	do	12	240 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
94,788	Laura C. Zwicker..	Lunenburg	85	Abraham Ernst, M.O..	Mahone Bay ...	12	240 00
88,360	Lettie M. Hardy...	do	97	W. A. Pickels, M.O..	do	*19	234 00
97,092	Lurline	do	57	Amiel Corkum, M.O..	La Have	12	171 00
83,316	Lottie	Port Medway...	81	Sam. E. Teel, M.O..	Voglers Cove...	14	240 00
94,780	Lawrence	Lunenburg	87	G. A. Smith, M.O..	Lunenburg	14	240 00
96,827	Leopold	do	93	Charles Smith, M.O..	do	15	240 00
96,832	Laura M. Knock...	do	87	David Smith	do	*14	240 00
96,838	La France	do	89	S. Watson Oxner	do	*12	222 86
100,484	Lavanda	do	53	George Conrad, M.O..	do	12	159 00
96,833	L. E. Young	do	89	Benj. Anderson, M.O.	do	14	240 00
90,854	Latona	do	107	L. Anderson & Co., M.O.	do	14	240 00
100,562	Millie L. El.	do	65	Abraham Ernst, M.O..	Mahone Bay ...	*11	186 88
90,823	Miletus	do	95	Jno. Shankle, M.O..	La Have	15	240 00
69,213	May Fly	do	12	Jacob Richard, M.O..	do	4	36 00
96,840	Mayflower	do	60	Robt. Dawson, M.O..	Bridgewater ..	10	180 00
100,162	Magie	do	45	John D. Sperry, M.O.	Petit River	8	135 00
97,052	Minnie Maud	Liverpool	84	John S. Wolfe, M.O..	West Dublin...	15	240 00
92,632	Monarch	Lunenburg	83	J. H. Wilson, M.O..	Lunenburg	14	240 00
97,000	Maggie M. W.	do	88	do	do	14	240 00
92,635	M. B. Smith	do	84	Wm. C. Smith, M.O..	do	14	240 00
74,319	Merino	do	46	J. Jos. Rudolph, M.O.	do	9	138 00
100,487	Mabel B.	do	43	Thomas Ham, M.O..	do	10	129 00
92,633	Magnolia	do	83	Joshua Heckman, M.O.	do	12	240 00
49,777	Morris E. Geldert.	do	99	Geo. Geldert, M.O..	do	14	240 00
94,775	Malabar	do	97	R. H. Griffith, M.O..	do	14	240 00
94,772	Molega	do	99	Ben. Anderson, M.O..	do	14	240 00
92,640	Minerva	do	83	Wm. C. Acker, M.O..	do	*11	230 00
100,153	Milo	do	99	J. Wm. Young, M.O.	do	14	240 00
88,342	Nova Zembla	do	79	Joseph Ham, M.O..	Mahone Bay ...	15	237 00
88,603	Nokomis	do	94	C. U. Mader, M.O..	do	14	240 00
100,485	Nightingale	do	52	John Haughn, M.O..	La Have	*10	148 91
94,655	Nevada	do	46	James Bell, M.O..	do	9	138 00
94,966	Nicanor	do	79	Henry Westhaver, M.O.	Martin's Brook..	12	237 00
92,636	Nonpareil	do	88	John Zinck, M.O..	Lunenburg	14	240 00
90,827	Nyanza	do	116	L. Anderson & Co., M.O.	do	12	240 00
75,570	Olive Branch	do	14	John Church	Aspotogan	* 2	35 00
94,641	Ovando	do	87	Jeffry Publicover, M.O.	La Have	15	240 00
90,587	OrnatuS.	do	89	Albert McKean, M.O.	do	15	240 00
88,346	Olive	do	102	Daniel Getson, M.O..	do	13	240 00
100,157	Orinoco	do	56	Isaac Westhaver, M.O.	Martin's Brook..	11	168 00
85,562	Oresa	Barrington	14	Arthur Mason, M.O..	Eastern Point...	4	42 00
94,779	O. P. Silver	Lunenburg	89	Chas. L. Silver, M.O..	Lunenburg	14	240 00
94,786	Ontario	do	89	Joshua Hirtle, M.O..	do	14	240 00
100,477	Pilot	do	42	Thos. Wilson, M.O..	Bridgewater ..	* 7	118 13
94,774	Puritan	do	94	Jas. Creaser, Sr., M.O.	Ritcey's Cove...	14	240 00
100,486	Pandora	do	53	Benj. Lohnes, M.O..	Lunenburg	*12	152 89
85,647	Pembina	do	93	L. Anderson & Co., M.O.	do	15	240 00
97,087	R. C. Bruhm	do	61	Abraham Ernst, M.O.	Mahone Bay ...	11	183 00
92,320	Rialto	Liverpool	46	L. B. Currie, M.O..	West Dublin...	9	138 00
100,473	Rapture	Lunenburg	57	Alvin Moser, M.O..	Lunenburg	12	171 00
96,834	Robert F. Mason ..	do	87	Martin Mason, M.O..	do	14	240 00
88,349	Senovar	do	89	Nathan Hiltz, M.O..	Martin's Point..	14	240 00
100,165	Snow Queen	do	67	Leander Meisner	Mahone Bay ...	12	201 00
94,962	Steela E.	do	98	Reuben Ritcey	La Have	*12	222 86
100,471	Secret	do	86	J. B. Young, M.O..	Lunenburg	14	240 00
94,868	Sadie	do	79	Charles Smith, M.O..	do	14	237 00
100,475	Tartar	do	61	W. Norman Reinhardt, M.O.	La Have	12	183 00
100,476	Tokalon	do	52	Albert McKean, M.O.	do	*10	148 91
92,623	Torridon	do	105	Murdoch MacGregor, M.O.	do	14	240 00

DETAILED STATEMENT of Fishing Bounties paid to **Vessels**, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
94,657	T. W. Langille	Lunenburg	71	Francis Conrad, M. O.	Lunenburg	*14	213 00
97,099	Union	do	78	Wm. Smeltzer, M. O.	do	10	214 50
97,098	Urania	do	99	David Heisler, M. O.	do	14	240 00
94,649	Valenar	do	83	Nathan Hiltz, M. O.	Martin's Point	12	240 00
100,479	Venator	do	57	Jos. Silver, M. O.	Upper La Have	+11	163 88
97,086	Vevia G.	do	53	James Getson, M. O.	La Have	11	159 00
85,635	Vanilla	do	102	John M. Ritcey, M. O.	Ritcey's Cove	15	240 00
83,164	Valiant	do	88	Thos. A. Cook, M. O.	Ritcey's Cove	13	240 00
85,735	Victory	do	97	A. H. Zwicker, M. O.	Lunenburg	14	240 00
90,597	Vivian	do	99	do	do	14	240 00
94,956	Venezuela	do	93	Geo. Blair, M. O.	do	14	240 00
94,967	White Cloud	do	97	C. U. Mader, M. O.	Mahone Bay	14	240 00
94,642	Winnie C.	do	55	Edmen Walters, M. O.	La Have	12	165 00
94,953	W. D. Richard	do	97	W. N. Reinhardt, M. O.	do	15	240 00
100,152	Werra	do	85	David Smith, M. O.	Lunenburg	14	240 00
96,829	Wisteria	do	96	Freeman Anderson, M. O.	do	14	240 00
71,368	Zelu	do	21	Gabriel Smeltzer, M. O.	do	6	63 00

† One of crew belongs to Newfoundland.

QUEEN'S COUNTY.

97,048	Annie and Lizzie	Liverpool	39	A. W. Hendry	Liverpool	7	104 00
75,571	Fanny	do	16	Frank Mouser	Brooklyn	5	48 00
59,475	Jessen	Lunenburg	69	John Hutt	Port Medway	*10	189 76
75,762	May (Queen)	Liverpool	17	Edward F. Campbell	Liverpool	5	51 00
61,916	Only Son	do	16	J. H. Rhynard	Brooklyn	5	48 00
75,628	Rover	Shelburne	93	A. W. Hendry	Liverpool	17	240 00
94,776	Volunteer	Lunenburg	99	Murdoch McGrezer	Ritcey's Cove	*14	232 00
97,041	W. H. Smith	Liverpool	43	Herbert Smith	Brooklyn	10	128 85

RICHMOND COUNTY.

77,544	Alpha	Arichat	42	Wm. LeVesconte	D'Escousse	10	126 00
88,456	Alice May	do	39	do	do	9	117 00
83,086	Ada M.	Pt. Hawkesbury	20	Wm. Burk	River Bourg-ois	5	60 00
36,474	Alexander Fraser	Lunenburg	32	Anselme Sampson	do	9	96 00
77,851	Buxom	Sydney	11	Thomas McGrath	L'Ardoise	*2	27 50
94,680	Bonnie Glen	Halifax	17	Sylvester Bondrot	Petit de Grat	5	51 00
35,996	Blue Bell	Arichat	25	D. Gruchy & Son	D'Escousse	8	75 00
38,501	B. Weir & Co.	do	25	Celestin Cordeau	River Bourgeois	*6	69 65
54,156	British Lady	Halifax	19	Cyrille Sampson	do	*2	38 00
75,561	Boreas	Lunenburg	41	Jno. Colford	Port Richmond	*10	117 40
88,459	Caroline	Arichat	12	Wm. Babin	Arichat	2	36 00
43,109	Chatham Head	Miramichi, N. B.	24	Dominique Fougère	Poulamond	*6	63 00
74,100	Candid	Arichat	23	Désiré Burk	River Bourgeois	8	69 00
72,061	C. P. M.	do	22	Désiré Burk, sen.	do	6	66 00
92,597	Dreadnot	Sydney	10	Fred. Manbourquette	Rockdale	*2	22 50
72,058	Daisy	Arichat	34	Patrick Richard	Arichat	*3	89 25
83,033	Emma Proctor	Pt. Hawkesbury	41	Edward Proctor	Lower River Inhabitants	7	123 00
77,822	Eliza Smith	Arichat	44	Patience Poirier	Low. D'Escousse	11	132 00
75,616	Eliza Jane	Shelburne	22	Casimir Vigneau	Arichat	*2	49 50
83,395	Elerie	Halifax	29	Docité Fougère	River Bourgeois	8	87 00
38,477	Elizabeth	Arichat	18	Placide Burk	do	*5	49 50
69,190	Emma	do	47	Angus J. Boyd	do	10	141 00
77,843	Elizabeth	do	30	Isidore Sampson	do	8	90 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—*Con.*RICHMOND COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
61,606	Edmund Russell...	Arichat....	28	Geo. Walker....	Basin River In- habitants....	3	84 00
74,166	Fama	Halifax.....	44	Wm. LeVesconte....	D'Escousse.....	10	132 00
83,399	Fannie R. C.	do	22	Peter Boudrot.....	River Bourgeois. *	6	61 29
88,462	Fannie S	Arichat.....	28	Daniel Sampson....	River Bourgeois. *	8	84 00
85,599	Guide.....	Halifax.....	38	Edward Poirier....	L'w'r D'Escousse	11	114 00
90,734	H. M. Crosby....	Port Hawksbury	64	J. W. Cruikshank..	Port Richmond..	*13	185 15
95,764	Ida C. Spoffard..	do	54	Robert Murray....	do	4	162 00
85,560	Jacques.....	Yarmouth.....	58	Fredk. Poirier....	D'Escousse..	*13	167 79
88,454	Jubilee.....	Arichat.....	34	D. Gruchy & Son....	do	10	102 00
38,486	Julia.....	do	20	Louis Burk.....	River Bourgeois. *	5	60 00
80,972	John Vincin. .	Sydney	17	Peter Burk.....	do	5	51 00
83,135	J. B. M.	Halifax.....	27	Louis Boucher....	do	* 3	70 88
88,455	Laura Victoria..	Arichat.....	39	Jno. Mauger.....	Cape LaRonde..	10	117 00
72,070	Lennox.....	do	46	D. Gruchy & Son....	D'Escousse.....	11	138 00
75,875	Lida and Lizzie..	do	56	Wm. LeVisconte....	do	12	168 00
38,516	Lady of the Lake	do	26	Peter Landry.....	St. Peter's	* 7	73 13
72,071	Lumen Diei.....	do	20	Urbain Sampson....	River Bourgeois. *	5	60 00
83,100	Morning Star....	PortHawk'sbury	13	Abraham Gerrior..	Port Royal.....	2	39 00
69,969	Morning Light...	do	39	David Walker.....	Basin River In- habitants....	4	117 00
38,417	Messenger.....	Arichat.....	30	Remi Fougère.....	Poulamond.....	10	90 00
46,082	Mary	do	43	D. Gruchy & Son....	D'Escousse.....	12	129 00
58,431	Mayflower.....	Halifax.....	21	Stephen Dugas.....	River Bourgeois. *	4	56 70
72,063	Mayflower.....	Arichat.....	12	John Burk.....	do	4	36 00
38,522	Mary	do	23	Isiah Boudrot.....	do	* 3	49 29
74,365	Nova Stella.....	do	53	Leonie Poirier....	L'w'r D'Escousse	14	159 00
72,048	Neptune	do	26	Henry Sampson....	River Bourgeois. *	5	66 86
61,630	Olive J.....	Halifax.....	57	Geo. Malcolm.....	Port Malcolm....	7	171 00
54,139	Ocean Belle....	do	20	Elias Bouchard....	River Bourgeois. *	6	60 00
74,332	Proditor.....	do	54	Alfred Poirier....	L'w'r D'Escousse	*13	156 22
72,067	Philomen D....	Arichat.....	22	Tranquil Dégout...	River Bourgeois. *	7	66 00
38,462	Partners.....	do	26	Thomas Sampson....	do	* 6	68 26
38,452	R. Ferguson....	do	24	Maurice Burk.....	St. Peters	7	72 00
75,763	Ripple.....	do	17	Dan. McDonald....	Basin River In- habitants....	2	51 00
88,439	Ripple.....	Halifax.....	20	Isidore Boudrot....	Petit de Grat....	4	60 00
72,059	Richmond Queen.	do	37	Anselm Fougère....	Poulamond.....	9	111 00
64,033	Ripple.....	PortHawk'sbury	34	G. A. Cruickshank..	Port Richmond. *	2	76 50
37,612	Sea Slipper.....	Lunenburg	41	Chas. Mauger.....	Cape LaRonde..	10	123 00
85,645	Sissi Belle.....	Halifax.....	40	Anable Pottie.....	False Bay.....	10	120 00
51,781	S. E. Cove.....	Arichat.....	54	Peter Campbell....	Arichat.....	*13	156 22
92,599	Thistle.....	Sydney	11	A. Manbourquette..	L'Ardoise.....	3	33 00
38,480	Two Brothers....	Arichat.....	32	Simon Landry.....	River Bourgeois. *	8	96 00
61,990	Union.....	Halifax.....	20	Felix Burk.....	do	* 4	50 00
71,034	Vanguard.....	Barlington....	47	Dom. Boudrot.....	Petit de Grat....	* 6	123 38
57,662	Village Bride...	Halifax.....	24	Petter Malcolm....	Port Malcolm ..	5	72 00

SHELBURNE COUNTY.

88,552	Afton.....	Shelburne	72	Jonathan Locke....	Lockeport.....	16	216 00
41,772	Ann Maria.....	Lunenburg	32	Geo. Redding.....	do	9	96 00
94,632	A. C. Greenwood..	Shelburne	15	Thos. D. Goodrick..	Sandy Point ... *	3	33 75
90,655	Annina.....	Yarmouth	12	W. H. Kenney.....	Clarks Harbour *	6	33 43
85,490	Billy Browne....	Shelburne	88	Enos. Churchill....	Lockeport.....	*14	213 36
90,900	Bertha Kelly....	Yarmouth	12	Wm. P. Snow.....	Port La Tour....	3	36 00
88,551	Blanche M. Thor- bourne.....	Shelburne	95	Jn. H. Thorbourn...	Jordan Bay. .	*21	234 55
96,970	Charlie Richardson.	do	26	Enos Churchill....	Lockeport.....	8	78 00
94,942	Coronilla.....	do	23	C. Locke & Co.....	do	* 6	60 38

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—Con.

SHELburne COUNTY—Concluded.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							cts.
90,434	C. A. Goreham ..	Barrington	33	Chas. Goreham	Wood's Harbour ..	* 6	79 20
61,905	Champion	Liverpool	14	Robert Smith	Atwood's Brook ..	* 2	28 00
83,492	Dessie	do	11	Edward Capstick	Lockeport	* 3	28 88
75,624	Dwina	Shelburne	52	Wm. Lloyd, jun.	Brighton	*11	149 50
83,043	Ella A. Downie ..	do	73	Enos Churchill	Lockeport	*12	197 10
96,976	Edith	do	40	Churchill Locke	do	* 8	113 34
88,545	Ella Maud	do	55	C. Locke & Co	do	13	165 00
75,558	Emma B	Barrington	94	Benj. Goodwin	Cape Island	*13	224 00
77,603	Eldon C	do	27	Arthur Hood	Shelburne	* 5	74 25
90,644	Eva Mc	Yarmouth	19	Thos. L. Nickerson ..	Wood's Harbour ..	* 3	38 01
85,476	Fleetwing	Shelburne	11	Edward Hammond	Jordan Bay	* 4	29 70
85,478	Glenora	do	76	Churchill Locke	Lockeport	*14	213 76
90,437	Geneva Myrtis ..	Barrington	32	Colin C. Nickerson ..	Wood's Harbour ..	* 4	72 00
85,503	G. P. Taylor	St. John, N.B.	14	Nathaniel Swim	Clark's do	3	42 00
90,647	Hattie Emeline ..	Yarmouth	11	Charles Reynolds	Port Latour	5	33 00
80,799	Hattie T	Digby	16	Isaac Kendrick	Shag Harbour	8	48 00
88,554	Jersey Lily	Shelburne	96	Enos Churchill	Lockeport	*15	225 90
94,941	John Purney	do	98	Geo. King	Sandy Point	*19	223 65
85,566	J. Lyons	Barrington	14	Thos. L. Banks	Doctor's Cove	* 3	36 75
77,761	Knight Templar ..	Shelburne	90	Enos Churchill	Lockeport	18	240 00
73,907	Katie	Liverpool	14	Burns McKenzie	Green Harbour	6	42 00
90,642	Komaroff	Yarmouth	10	John R. Snow, M.O.	Port Latour	* 2	22 50
54,114	Lone Star	Halifax	29	C. Locke & Co	Lockeport	* 7	81 57
90,438	Lark	Barrington	13	Samuel Atwood	Barrington	* 2	24 38
80,624	Lima	Yarmouth	12	Smith Webb	Newelton	* 6	33 43
85,488	Mabel Somers	Shelburne	98	Enos Churchill	Lockeport	*16	232 95
83,256	Marquis of Lorne ..	Annapolis	27	Churchill Locke	do	* 5	63 00
83,493	Mary C	Liverpool	84	C. Locke & Co	do	20	240 00
88,583	Mary O'Dell	Yarmouth	14	John Sholes	Bear Point	* 5	38 50
75,550	Martino	Barrington	11	Theodore Nickerson ..	Shag Harbour	* 4	29 70
96,975	Mary	Shelburne	98	John A. McGowan	Shelburne	*21	234 55
83,434	Mary May	Barrington	20	Arthur Nickerson, M.O.	Doctor's Cove	* 4	45 00
72,977	Nellie H. Hamm ..	Digby	26	Dan. V. Kenney	Clark's Harbour ..	* 7	63 84
96,977	Oriole	Shelburne	43	C. Locke & Co	Lockeport	*11	123 63
90,439	Oscar F	Barrington	18	James E. Swim	Clark's Harbour ..	7	54 00
55,830	Oregon	Shelburne	20	John C. McGray	Centreville	* 5	55 00
88,483	Sarah H. Seaton ..	do	95	C. Locke & Co	Lockeport	*19	228 58
90,690	Sandalphon	do	105	do	do	*17	233 34
85,390	Susan C	Barrington	21	P. P. Smith	Centreville	* 4	52 50
90,433	St. Ann	do	11	John W. Kenney	Clark's Harbour ..	6	33 00
88,542	Three Bells	Shelburne	92	Enos Churchill	Lockeport	*13	206 69
96,961	Tivoli	do	24	Jonathan Locke	do	7	72 00
90,894	Theresa	Yarmouth	18	Chas. E. Kenny	Clark's Harbour ..	* 6	45 00
90,893	Thomas H	do	13	Fred. Nickerson	do do	* 8	36 84
85,541	Willie M	do	24	Herbert Kendrick	Shag do	9	72 00
90,430	Will Carleton	Barrington	88	H. D. Smith, M.O	Port Latour	*16	232 95
75,722	Yuba	Yarmouth	15	J. A. Nickerson	Shag Harbour	8	45 00

VICTORIA COUNTY.

57,687	Quickstep	Halifax	22	John Rose	McKinnon's Har ..	* 2	55 00
73,119	Royal	do	12	Angus McFarlane	do	* 2	30 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Nova Scotia—*Con.*

YARMOUTH COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
80,627	Annie D.	Yarmouth.	71	D. D'Entremont.	Pubnico.	*19	207 68
97,034	A. D'E.	do.	15	I. D'Entremont.	do.	* 3	33 75
94,980	Aurore.	do.	86	Leon D'Eon.	do.	* 21	240 00
80,647	Annie M. Bell.	do.	64	Raymond Amiro.	East Pubnico.	*19	187 20
71,032	Arthur.	do.	22	J. B. Lewis.	Yarmouth.	* 7	56 10
94,977	Civilian.	do.	97	D. L. Amiro.	West Pubnico.	16	240 00
80,605	Coral Leaf.	do.	71	Harvey Goodwin.	Pubnico Head.	*17	197 04
69,217	Chlorus.	do.	57	A. F. Stoneman & Co.	Yarmouth.	17	171 00
85,536	Circassian.	do.	98	do.	do.	*16	226 68
66,679	Diploma.	do.	84	Nic. D'Entremont.	West Pubnico.	20	240 00
90,871	Dora.	do.	63	A. F. Stoneman & Co.	Yarmouth.	*20	184 50
97,036	Eva.	do.	10	Gabriel Bourque.	Sluice Point.	* 5	27 50
85,551	Ethel.	do.	117	J. H. Porter & Co.	Tusket Wedge.	16	240 00
90,654	Flora.	do.	64	D. D'Entremont.	Pubnico.	20	192 00
94,972	Florence.	do.	11	Joshua Boudreau.	Tusket Wedge.	3	33 00
100,315	Freddie A.	do.	10	Eben. Crosby.	Yarmouth.	* 3	24 00
90,885	Georgina.	do.	90	H. & N. B. Lewis.	do.	22	240 00
85,554	Hazel Glen.	do.	95	Hy. T. D'Entremont.	L. E. Pubnico.	14	240 00
80,643	Hazel Dell.	do.	87	Parker, Eakins & Co.	Yarmouth.	*16	232 95
80,641	Jonathan.	do.	68	C. T. D'Entremont.	W. Pubnico.	20	204 00
88,581	Kingfisher.	do.	47	A. F. Stoneman & Co.	Yarmouth.	*15	132 72
51,972	Lydia Ryder.	do.	57	L. P. D'Entremont.	Pubnico.	20	171 00
80,614	Louise.	do.	85	J. H. Porter & Co.	Tusket Wedge.	*17	233 34
90,887	L'Etoile.	do.	48	do.	do.	17	144 00
85,533	Minnie C.	do.	12	J. N. Sanders.	Port Maitland.	* 3	31 50
88,596	M. A. Louis.	do.	64	M. A. Surette.	Pubnico.	20	192 00
85,539	Maggie Jane.	do.	12	Geo. Wyman.	Sandford.	* 4	32 40
74,339	Maitland.	do.	42	H. & N. B. Lewis.	Yarmouth.	*12	110 28
90,659	N. A. Laura.	do.	59	Chas. C. D'Entremont.	W. Pubnico.	20	177 00
74,330	Nokomis.	do.	68	J. R. Rogers.	Sluice Point.	*20	199 15
90,892	Nellie.	do.	59	J. H. Porter & Co.	Tusket Wedge.	19	177 00
80,645	Opal.	do.	97	Parker, Eakins & Co.	Yarmouth.	*11	202 50
80,628	Roseneath.	do.	92	Byron Hines.	E. Pubnico.	19	240 00
100,313	Souvenir.	do.	71	S. D. D'Entremont.	W. Pubnico.	20	213 00
88,589	Sandford.	do.	20	Howard Thurston.	Sandford.	* 4	47 16
85,935	Sigefroi.	do.	40	J. H. Porter & Co.	Tusket Wedge.	9	120 00
77,956	Speed.	Annapolis.	13	J. H. Eldridge.	Yarmouth.	* 2	27 30
96,962	Sunrise.	Yarmouth.	18	J. E. Crosby.	do.	* 2	40 50
88,597	Uncle Sam.	do.	97	Geo. D. D'Entremont.	W. Pubnico.	22	240 00
90,882	Will-o'-the-Wisp.	do.	51	Anthony D'Entremont.	do.	18	153 00
90,897	Wrasse.	do.	56	A. F. Stoneman & Co.	Yarmouth.	21	168 00
90,896	Wapiti.	do.	100	do.	do.	18	240 00

DETAILED STATEMENT of Fishing Bounties paid to **Vessels, &c.**—*Continued.*

PROVINCE OF NEW BRUNSWICK.

CHARLOTTE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner, or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
94,727	Aurelia.....	St. John.....	22	James Scovil.....	Flagg's Cove....	* 2	55 00
64,011	Bee	St. Andrew's....	18	Henry Fletcher....	Wilson's Beach..	3	54 00
88,409	Carrie.....	Digby, N.S....	11	James McLeese....	Back Bay.....	2	33 00
59,375	Cadet.....	St. Andrew's....	19	Ethelbert Savage..	Wilson's Beach..	3	57 00
88,387	Comet.....	Windsor, N.S..	10	Thomas Carter.....	Beaver Harbour.	3	30 00
74,326	Dreadnaught..	St. Andrew's....	19	Alfred Stanley....	Flagg's Cove....	3	57 00
92,515	Dispute.....	do	13	Fred. Russell.....	Seal Cove.....	* 2	39 00
92,503	Defiance.....	do	17	Frank Calder.....	Welchpool.....	7	42 50
80,803	Exenia.....	Windsor, N.S..	18	Wm. F. Parker.....	Beaver Harbour.	3	54 00
92,505	Edith R.....	St. Andrew's....	47	Chas. Conley.....	Leonardville....	3	141 00
80,882	Ella Mabel....	do	14	Thos. Mitchell, jr..	Welchpool.....	3	42 00
59,373	E. M. Oliver..	do	14	S. L. Justason.....	Pennfield.....	a 2	14 00
92,511	Fleetwing....	do	11	B. H. Cosseboom..	Whitehead.....	2	33 00
59,393	Fannie.....	do	12	James Greenlaw....	Lord's Cove....	4	36 00
88,276	Falcon.....	do	12	James Brown.....	Wilson's Beach..	3	36 00
59,400	Foam Bell....	do	11	Thomas Bright....	Pennfield.....	3	33 00
94,834	Flora Wooster.	do	22	Hy. Burnham.....	Grand Manan....	a 3	33 00
94,835	Georgie Linwood.	do	25	Joshua Hawkins....	Beaver Harbour.	5	75 00
59,397	Gazelle.....	do	47	Wm. Watt.....	Grand Manan....	* 7	119 85
59,396	Gertie Westbrook.	do	16	James Cline.....	Lord's Cove....	5	48 00
92,508	Grey Eagle....	do	13	N. Mitchell, sr....	Welchpool.....	3	39 00
80,650	Happy Home..	Yarmouth, N.S.	14	Michl. Nodding....	Beaver Harbour.	3	42 00
83,463	Havelock.....	St. Andrew's....	33	Wm. James.....	Wilson's Beach..	5	99 00
94,839	Harry.....	do	14	Howard Jackson....	do	*	21 00
59,342	Lizzie McGee..	do	14	Andrew McGee....	Back Bay.....	3	33 60
77,766	Laeonic.....	Shelburne, N.S.	15	Jno. Welch.....	Leonardville....	3	45 00
77,965	Lydia B.....	St. Andrew's....	18	Jno. M. Calder....	Welchpool.....	3	54 00
88,407	Linnet.....	Digby, N.S....	15	Alva Brown.....	Wilson's Beach..	3	45 00
59,395	Little Minnie.	St. Andrew's....	11	Joseph McGee....	Back Bay.....	* 2	27 50
88,273	Lillian E.....	do	13	Andrew McGee....	do	3	39 00
59,321	Little Nell....	do	21	Wm. McLellan....	Welchpool.....	* 1	27 30
92,514	Maggie Jane..	do	10	John Cook.....	Back Bay.....	2	30 00
92,501	Maybe.....	do	11	Jno. Kelly.....	do	3	33 00
88,442	Mystery.....	Windsor, N.S..	14	E. A. Munroe.....	Beaver Harbour.	3	42 00
77,970	Mary Emeline.	St. Andrew's....	18	James Murphy....	Flagg's Cove....	3	54 00
59,326	Maud Holmes..	do	21	Jacob Cook.....	Le Tête.....	* 2	44 10
92,509	Mary Jane....	do	13	A. A. Calder.....	Welchpool.....	* 2	27 30
77,967	Naomi.....	do	14	Wm. James.....	Wilson's Beach..	3	42 00
94,833	Newsboy.....	do	16	Ernest Lank.....	do	3	48 00
75,602	Ocean Lily....	Digby, N.S....	17	Thomas Mitchell..	Welchpool.....	* 2	42 50
75,716	Onward.....	Yarmouth, N.S.	11	John Watt.....	Flagg's Cove....	* 2	27 50
92,518	Peril.....	St. Andrew's....	18	Martin Eldridge..	Beaver Harbour.	3	54 00
75,591	Rise and Go...	do	16	Wm. Sirls.....	Wilson's Beach..	3	48 00
88,287	Satellite.....	do	26	M. Eldridge and E. Wadlin	Beaver Harbour.	5	78 00
88,284	Sea Foam.....	do	13	Leonard Urquhart	Castalia.....	3	39 00
88,272	Simeon H. Bell.	do	14	Charles Dixon.....	Flagg's Cove....	* 2	35 00
59,357	Silver Bell....	do	13	Alex. Mallock....	Wilson's Beach..	3	39 00
88,414	Trumpet.....	St. John.....	20	Geo. W. Wright....	Beaver Harbour.	3	60 00
92,504	Tiger.....	St. Andrew's....	15	James Nesbitt....	Flagg's Cove....	3	45 00
59,387	Telephone....	do	19	C. H. Greenwood..	Wilson's Beach..	4	57 00
94,832	Venus.....	do	42	Simeon Brown.....	do	6	126 00
77,969	Wave Queen..	do	11	Wm. McMahan....	Le Tête.....	3	33 00

a. Owner debarred from participation in bounty.

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—New Brunswick—
Continued.

GLOUCESTER COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							¢ cts.
96,739	Angeline	Chatham	14	Octave Gionet	Caraquet	* 3	42 00
92,419	Anna	do	12	Docité Chiasson	Lameque	* 3	36 00
97,194	Alika	do	12	Lange Poulin, sr.	do	* 2	30 00
72,099	Adelina	do	12	Auguste Poulin	do	3	36 00
72,079	Betsy	do	13	Sébastien Noël	Little Lameque	3	39 00
96,725	Bessie T.	do	10	C. C. Turner	St. Isidore	3	30 00
96,730	Christina	do	11	Chas. DeGruchy	Caraquet	4	33 00
92,412	Dollie Dutton	do	13	Richard Young	Shippegan	3	39 00
96,737	Elmina	do	11	Jacques Noël	Lameque	3	33 00
100,293	Eliza	do	15	James DeGrace	Shippegan	* 3	39 38
92,417	Evangeline	do	11	Richard Young	do	* 4	29 70
96,732	Emma	do	15	Ludger Duguay	Shippegan Island	3	45 00
85,699	Four Sisters	do	10	Marcel Caron	Caraquet	3	30 00
61,437	Flying Fish	do	11	Elie Chiasson	Little Lameque	3	33 00
61,445	Flavie	do	13	Théophile Duguay	Lameque	4	39 00
96,736	Fly	do	14	Richard Young	Shippegan	* 2	31 50
96,733	Gem.	do	12	do	do	* 3	31 50
92,418	Grip	do	12	James Davidson	Tracadie	3	36 00
96,724	Isabel	do	11	Pierre Noël	Lameque	3	33 00
92,403	Maria	do	25	Ubalde Landry	Grande Anse	3	75 00
100,295	Marie Louise	do	18	J. A. Paulin	Caraquet	4	54 00
100,292	Marie Joseph	do	12	Lazare Gauvin	Little Lameque	3	36 00
88,669	Morning Star	do	12	Gustave Gionet	Pokemouche	3	36 00
92,420	Mary Louise	do	13	Wm. LeBreton	do	3	39 00
61,447	Merida	Miramichi	13	A. Aché	Lameque	* 3	34 13
72,100	Marie	Chatham	11	Onésime Chiasson	do	3	33 00
61,442	Marie Cécile	do	15	Olivier Duguay	do	4	45 00
92,413	Mary Jane	do	14	Théodore Savoy	Tracadie	4	42 00
96,740	Providence	do	13	Prosper Albert	Caraquet	3	39 00
72,076	Providence	Miramichi	12	Thomas Ahier	do	* 3	31 50
96,732	Providence	Chatham	11	Jos. L. Robichaud	Shippegan	* 1	5 50
97,191	Rita	do	12	Chas. DeGruchy	Caraquet	3	36 00
61,406	Reward	do	11	Hyacinthe LeBoutillier	do	* 3	28 88
61,438	Rosane	do	13	Lange Duguay	Little Lameque	4	39 00
96,727	Ryse	do	11	Jérémie Aché	Lameque	3	33 00
92,408	Sarah A. W.	do	15	R. J. Wilson	Miscou Island	4	45 00
74,401	Sara	do	11	Nazaire Noël	Lameque	3	33 00
96,731	Sea Star	do	13	Joseph M. Savoy	Shippegan Island	3	39 00
96,738	Three Brothers	do	12	Richard Young	Shippegan	3	36 00
96,735	White Fish	do	12	Joseph Savoy, jr.	Lameque	4	36 00
88,663	Wm. Sinclair	do	17	Gervais Duguay	Shippegan	4	51 00

KENT COUNTY.

94,793	May English	Richibucto	10	Daniel English	Kingston	* 1	22 50
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NORTHUMBERLAND COUNTY.

75,904	Empress	Chatham	26	R. R. Call	Newcastle	7	78 00
75,891	May Queen	do	23	do	do	5	69 00
78,044	Princess Louise	do	21	do	do	5	63 00
78,895	Two Brothers	do	26	do	do	7	78 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—New Brunswick—
Continued.

ST. JOHN COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
\$5,972	Dove.....	St. John.....	11	Sam. McGuire, sr.....	Pisarinco.....	4	28 87
\$8,253	E. B. Colwell.....	do	19	Addison Thompson....	Chance Hbr.....	4	57 00
57,181	Hattie.....	Windsor, N.S....	13	S. Galbraith.....	Pisarinco.....	3	39 00
59,394	Hattie.....	St. Andrew's....	10	C. Harkins	Dipper Hbr....	3	30 00
\$3,259	Hattie May..	Annapolis, N.S..	15	Jno. Butler	Musquash.....	3	45 00
59,322	Sea Flower.....	St. John.....	11	Jas. Thompson.....	Chance Hbr.....	3	33 00
72,973	Sea Breeze.....	Digby, N.S.....	13	Jno. G. Graham.....	Musquash.....	3	39 00

WESTMORELAND COUNTY.

78,049	Pholine	Chatham... ..	26	F. X. Legère.....	Shediac.....	5	71 50
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DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—Continued.

PROVINCE OF PRINCE EDWARD ISLAND.

KING'S COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
74,141	Belle	Guysboro', N.S. .	31	Alex. Jackson	Murray Hbr....	* 5	79 70
69,132	Belle of the Bay....	do ..	20	Mathew Gosbee.....	do South	4	60 00
92,675	Can't Help It.....	Pictou, N.S.	40	John Herring.....	do	8	120 00
38,335	Elizabeth	Arichat	17	D. W. Hemphill.....	Georgetown.....	6	51 00
92,465	Elisha Crowell.....	Charlottetown ..	69	Jno. Cairns.....	Montague	3	125 70
83,196	Ethel Blanche.....	Pictou, N.S.	17	Reuben Cahoon.....	Beach Point ..	4	51 00
88,644	Hattie	Charlottetown ..	18	Henry Dicks.....	Georgetown.....	4	54 00
75,481	Julia Ward.....	do ..	39	Wm. Harris.....	Murray Hbr....	7	104 00
75,882	Lord McDonald.....	do ..	15	David Cahoon.....	do	3	45 00
69,109	Marcella Butler....	Halifax, N.S.	38	Jno. Hemphill.....	Burnt Point....	4	114 00
90,639	Morell.....	Charlottetown ..	16	Edward Delorey.....	Brudenell.....	* 3	38 40
88,350	Orion.....	do ..	77	Aaron Cogswell.....	Georgetown.....	15	231 00
90,488	Wave	do ..	19	James Delorey.....	Brudenell.....	* 0	28 50

PRINCE COUNTY.

72,081	Annie	Chatham, N.B. .	13	Jno. McDonald.....	Campbellton....	* 2	32 50
71,310	Blackwatch.....	Charlottetown ..	24	Benj. Perry.....	Alberton	4	72 00
82,086	Charlie.....	do ..	64	J. H. Myrick & Co....	Tignish	5	192 00
55,827	Candor.....	Shelburne	77	J. S. Allen.....	Summerside ..	* 5	198 00
86,642	Express.....	Charlottetown ..	46	John Champion.....	Alberton	13	138 00
71,331	Jessie Newell.....	Barrington	63	D. Montgomery.....	Summerside ..	5	189 00
83,105	Katie Bell.....	Richibucto.....	11	J. T. Murphy.....	Campbellton....	* 1	22 00
59,663	Lottie	Charlottetown ..	57	J. H. Myrick & Co....	Tignish	* 3	128 25
92,455	Mikado	do ..	38	John Agnew.....	Alberton.....	4	102 60
83,096	St. Patrick	Pt. Hawkesbury	11	Jno. White.....	do	3	33 00
96,926	Sea Foam	Charlottetown ..	15	W. G. Ramsay.....	Malpeque.....	* 4	40 50
92,610	S. A. Parkhurst....	Sydney	43	Jas. S. Gordon.....	Alberton.....	10	129 00

QUEEN'S COUNTY.

92,464	Eliza M.....	Charlottetown ..	18	Wm. Bell.....	French River...*	3	43 20
92,466	G. H. Gardiner....	do ..	17	G. H. Pursey	North Rustico..*	3	44 62
75,782	Hattie E.....	do ..	35	Wallace Harding....	French River...*	4	75 82
96,936	Katie & Ella.....	do ..	20	Geo. H. Toombs.....	Charlottetown ..	4	60 00
71,334	Watchman	Barrington, N.S.	15	H. M. Churchill.....	North Rustico ..*	1	27 00

DETAILED STATEMENT of Fishing Bounties paid to **Vessels**, &c.—*Continued*.

PROVINCE OF QUEBEC.

BONAVENTURE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
80,716	Annie.....	New Carlisle. ..	10	Wm. Buttle.....	New Carlisle....	* 2	25 00

GASPÉ COUNTY.

73,495	Canadienne.	Halifax, N.S....	52	John N. Arseneau...	Grindstone, M.I.	11	149 50
71,357	Emma Gidney.....	do	48	John P. Savage ...	Amherst.....	11	144 00
75,449	Marie Louise.....	Gaspé.....	11	A. Lacovie	Sandy Beach. . .	3	33 00
94,677	Progress	Halifax, N.S....	14	Geo. A. Leslie.	Amherst Hbr....	* 3	36 75

SAGUENAY COUNTY.

74,270	Amarilda.....	Quebec.....	24	Pierre Bernier.....	Bic.....	4	72 00
42,436	Amelia.....	Gaspé.....	50	Paul Cormier	Pt. Esquimaux .	10	150 00
57,742	Acara	Halifax	30	Fred. Jomphe.....	do	7	90 00
83,370	C. M. G. P.....	Quebec.....	46	Nap. Picard.....	do	10	138 00
59,909	Elizabeth.....	do	27	J. & E. Caron.....	Sandy Bay	4	81 00
80,754	Eugenie.....	do	48	André Vigneau.....	Pt. Esquimaux .	* 8	136 00
75,679	Gleaner.....	do	41	Luke Cormier.....	do	* 9	116 85
83,750	H. B.....	do	57	J. B. & H. Boudreau.	do	9	171 00
85,753	Java.....	do	46	Dom. Cormier	do	9	138 00
42,435	Labrador.....	Gaspé.....	43	Narcisse Rioux. . .	do	8	129 00
55,863	Marie Adelmima...	Quebec.....	13	Cyrille Levesque.....	Green Island ...	3	39 00
69,584	Marie Louise.....	do	23	Pierre Ouellette.....	Quebec.....	4	69 00
69,382	Marie du SacréCœur	Gaspé.....	46	O. Turbide, <i>et al</i>	Pt. Esquimaux .	10	138 00
69,662	Marie Aurélie.....	Quebec.....	32	Joseph Gagné, sr.....	Murray Bay....	5	96 00
69,380	Marie Anne.....	Gaspé.....	36	Hypolite Landry.....	Pt. Esquimaux .	* 7	101 25
80,753	Stella Maris.....	Quebec.....	51	L. & C. Cumming.....	do	10	153 00
69,591	Ste. Marie	do	37	Alexis Sherer.	do	8	111 00
66,727	Willow.....	do	18	Louis Boulet.....	Montmagny	4	54 00

DETAILED STATEMENT of Fishing Bounties paid to Vessels, &c.—*Continued.*

PROVINCE OF NOVA SCOTIA.

The following Vessel claims for 1891, held in abeyance were paid in 1892-93.

HALIFAX COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
55,836	Frank Newton.....	Sydney.....	40	Theo. Conrod (1)	Sheet Harbour..	7	\$ cts. 30 00

(1) Owner debarred.

PROVINCE OF NEW BRUNSWICK.

KENT COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
83,104	Minnie Long	Richibucto.....	20	Wm. Long	Richibucto	2*	\$ cts. 25 00

APPENDIX No. 3.

REPORT ON THE FISHERIES PROTECTION SERVICE OF CANADA, 1893, BY ACTING COMMANDER O. G. V. SPAIN.

The Honourable

Sir CHARLES HIBBERT TUPPER, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to report to you on the work of Fisheries Protection Service under my command for the past season.

"Acadia," Commander O.G.V. Spain, commissioned 1st June, paid off, 14th Nov.

"Stanley," Captain Finlayson, commissioned 15th June, paid off, 4th October.

"Curlew," Captain Pratt, remains in commission.

"Constance," Captain May, commissioned April, paid off, November.

"Vigilant," Captain Knowlton, commissioned 15th April, paid off, December.

"Kingfisher," Captain Kent, commissioned 1st June, paid off, 1st November.

"La Canadienne," Captain Bélanger, commissioned May, paid off, October.

The "Acadia" was employed during the season on the coasts of Nova Scotia, Cape Breton, and in the Gulf; she also made a trip to various places in the Gulf with the International Fisheries Commissioners.

"La Canadienne" took her district on the Quebec shore and the Northern Gulf, this vessel was on special service the whole season, and worked independently of the other vessels of the fleet.

The "Stanley" cruised between the east point of Prince Edward Island and Port Daniel, in the province of Quebec, this vessel during the season made several special trips with officials to Anticosti, St. Paul's Island, &c.

The "Curlew" was employed throughout the season in the Bay of Fundy and on the Nova Scotia fishing grounds, making one trip round to Shelburne in November.

The "Constance" was employed in the Upper Gulf and River St. Lawrence doing revenue work. This vessel has been fitted with forced draught, and a steam cutter, to enable her to more effectually carry out her work as a revenue cruiser, it is also proposed to fit her with a search light.

The "Vigilant," This sailing schooner went into commission on the 15th April, and proceeded to the Magdalen Islands to meet the fleet. She was detained at Gaspé for some time, having made a seizure of the schooner "Laurence A. Monro" for an infraction of the customs laws, after the release of this vessel on payment of a fine, she was employed nearly the whole of the remainder of the season putting a stop to illegal lobster fishing on the south-east coast of Nova Scotia. This schooner remains out until the fishing fleet have departed from Canadian waters.

"Kingfisher." This schooner was chartered from Mr. Joe McGill, of Shelburne, and has proved herself a most efficient vessel in every respect. She was engaged off the east point of Prince Edward Island nearly the whole season, with the exception of a short time when she was employed on the Nova Scotia shore.

The granting of half-pay to the officers of the Fisheries Protection Service during the winter months when the vessels have to be laid up, has proved very beneficial to the service, instead of probably getting nearly all new officers every year, the old ones, who are beginning to understand the necessary drill and discipline requisite on board an armed government vessel, return. The liberality of the government was very much appreciated by these officers.

Good men are also extremely difficult to get about June, when most of the vessels commission. If some system could be adopted by which three or four of the best men at any rate, in each ship could be retained during the winter, it would be a great benefit to the service. At the present time at the end of the commission the men are all beginning to get really smart and well set up, and well drilled in the various exercises with the rifle and the cutlass, and the movements on the march, we lose them all, and have to begin with nearly all green hands in the following spring, whereas if three or four of the best hands were retained from each ship and then distributed in the spring, they would be of immense assistance in getting the remainder of the men into proper order.

The work of looking after the shore fisheries, by which is meant the actual enforcement of the laws for the regulation of the fisheries on the coast, has assumed very large proportions this year, and the work of enforcing the lobster regulations has taken up a great deal of the time of the fleet this season, whenever they could possibly be spared from their other duties. To effectually carry out these lobster regulations, it is most essential that two steam launches should be provided to act as tenders to the cruisers, without these it is almost impossible to keep a decided check on the illegal lobster fishing, as most of the vessels draw too much water to get near, and this entails an enormous lot of work on the boats' crews, causing them to pull very long distances, which they are unable to keep up for any length of time, the crews of all the cruisers being kept as small as possible.

I desire to thank the officers and men of the Fisheries Protection Service during the last season for the effective and trustworthy manner in which they have carried out their arduous and monotonous duties, which very often require a considerable amount of tact in their performance. Great good feeling prevails between my officers and masters of the United States fishing vessels.

SEIZURES.

Two seizures were made during the season, one the "Lawrence A Munro," U. S. fishing schooner, seized at the Magdalen Islands for the infraction of the customs laws. This vessel was taken to Gaspé, but was released on the payment of a fine of \$1,200 after a short period, and the "Lewis H. Giles," U. S. schooner, seized off Cape Egmont, east coast, Cape Breton, by Captain Knowlton, in the Dominion cruiser "Vigilant." This vessel was fishing inside the three-mile limit, the master pleaded he was not inside, but the vessel was taken to Sydney and partially dismantled; she was released on payment of a fine of \$2,500.

LICENSES FOR FOREIGN FISHING VESSELS.

SCHEDULE of United States Fishing Vessels to which Licenses were issued under the Act intituled "An Act respecting Fishing Vessels of the United States of America," during the Year 1893.

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				\$ cts.
Arthur Binney.....	Boston, Mass.	112	Shelburne, N.S.....	168 00
Joseph P. McGuire.....	Gloucester, Mass.....	88	Barrington, N.S.....	132 00
Elector.....	do	113	Pubnico, N.S.....	169 50
Monitor.....	do	104	do	156 00
Alice R. Lawson.....	do	115	do	172 50
Gatherer.....	do	90	do	135 00
Charles Levi Woodbury.....	do	100	do	150 00
Wm. E. Morrissey.....	do	117	do	175 50
Madonna.....	do	110	Yarmouth, N.S.....	165 00
Edgar S. Foster.....	Salem, Mass.....	94	Pubnico, N.S.....	141 00
Edward Grover.....	Gloucester, Mass.....	73	do	109 50
Carl W. Baxter.....	do	70	do	105 00
Margaret.....	Salem and Beverly, Mass..	131	do	196 50

SCHEDULE of United States Fishing Vessels to which Licenses were issued, &c.—*Con.*

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				\$ cts.
Ada M. Hall	Gloucester, Mass.	95	Shelburne, N.S.	142 50
Josie M. Calderwood	do	86	Pubnico, N.S.	129 00
Elsie M. Smith	do	106	do	159 00
Ella G. King	do	71	Shelburne, N.S.	106 50
Sarah E. Lee	do	98	do	147 00
Hazel Oneita	do	104	do	156 00
D. D. Winchester	do	79	Halifax, N.S.	118 50
Win. E. McDonald	do	93	do	139 50
Dora A. Lawson	do	119	Pubnico, N.S.	178 50
Lucy W. Dyer	Portland, Me.	78	Yarmouth, N.S.	117 00
W. Parnell O'Hara	Marblehead, Mass.	82	Digby, N.S.	123 00
Emily P. Wright	Boston, Mass.	92	Halifax, N.S.	138 00
Frank A. Rackliff	Gloucester, Mass.	99	Yarmouth	148 50
Hattie Maud	Portland, Me.	86	Shelburne, N.S.	129 00
Polar Wave	Gloucester, Mass.	86	Pubnico, N.S.	129 00
Emma and Ellen	do	90	Arichat, N.S.	135 00
Henry L. Philips	Rockland, Me.	76	Canso, N.S.	114 00
Maggie E. Wells	Gloucester, Mass.	80	Port Hawkesbury, N.S.	120 00
Mary J. Wells	do	86	do	129 00
Herbert M. Rogers	do	73	Shelburne, N.S.	109 50
Mary E. Webb	do	11	Port Mulgrave, N.S.	16 50
Loring B. Haskill	Boston, Mass.	91	Liverpool, N.S.	136 50
Clara S. Cameron	Dennis Port, Mass.	99	do	148 50
Reub. L. Richardson	Gloucester, Mass.	92	Amherst, M.I.	138 00
Henry M. Stanley	do	112	do	168 00
David A. Story	do	87	do	130 50
Lizzie Griffin	do	102	Arichat, N.S.	153 00
Edith M. McInnis	do	80	Port Hood, N.S.	120 00
Flora Dilloway	do	77	North Sydney, N.S.	115 50
We're Here	Booth Bay, Me.	53	Port Hood, N.S.	79 50
Mabel R. Bennett	Gloucester, Mass.	115	North Sydney, N.S.	172 50
Harry G. French	do	95	Canso, N.S.	142 50
May Flower	do	108	do	162 00
Eliza B. Campbell	do	95	do	142 50
Georgie Campbell	do	106	Port Hawkesbury, N.S.	159 00
J. W. Collins	do	74	Barrington, N.S.	111 00
Lottie Byrnes	Provincetown	92	St. Peter's, N.S.	138 00
Willie L. Swift	do	95	do	142 50
Lawrence A. Monroe	Gloucester, Mass.	110	Gaspé, Que.	165 00
Masconomo	do	92	Arichat, N.S.	138 00
Gertie Evelyn	do	81	do	121 50
Susan L. Hodge	do	78	Liverpool, N.S.	117 00
Annie H. Frye	do	64	Pubnico, N.S.	96 00
Winona	do	103	Arichat, N.S.	154 50
Martha C.	do	75	Canso, N.S.	112 50
Robin Hood	do	88	Arichat, N.S.	132 00
Bertha M. Miller	do	42	Pubnico, N.S.	63 00
Governor Butler	do	87	North Sydney, N.S.	130 50
Henrietta	do	75	Liverpool, N.S.	112 50
Anna L. Sanborn	Salem, Mass.	33	Pubnico, N.S.	49 50
Alena L. Young	Rockland, Me.	25	Shelburne, N.S.	37 50
David Sherman	Gloucester, Mass.	68	Port Mulgrave, N.S.	102 00
Storm King	do	35	Liverpool, N.S.	52 50
M. H. Perkins	do	72	Port Hawkesbury, N.S.	108 00
Charles H. Taylor	do	92	Georgetown, P.E.I.	138 00
Marathon	do	65	Canso, N.S.	97 50
Flash	do	69	do	103 50
J. S. Glover	Portland, Me.	54	Souris, P.E.I.	81 00
Spencer F. Baird	Gloucester, Mass.	74	Canso, N.S.	111 00
Total				9,243 00
Less—Collection of drafts				1 10
				9,241 90

SUMMARY.

Total number of vessels	72
Total tonnage	6,164
Total amount received in fees	\$ 9,241 90

Number of licenses taken out during the last five years:—

Year.	No.	\$	cts.
1889.....	78	9,589	50
1890.....	119	14,461	50
1891.....	98	11,098	50
1892.....	108	13,410	50
1893.....	71	9,130	90

The obtainment of frozen herring from Newfoundland is one of the chief fishery industries of New England in winter.

The Newfoundland frozen herring fleet this year promises to be a large one and 64 schooners from Gloucester and elsewhere, will engage in that branch of the fishery, in addition to these 64, more may be expected to go.

The amount of bait in the cold storage plants of New England is placed at about 13,000 barrels.

I would beg again to call attention to the difficulty vessels in the Fisheries Protection Fleet have of distinguishing United States from Canadian fishing vessels, some small distinguishing mark would be of great assistance, not having this mark gives rise on occasions to reports that U. S. vessels are fishing within the limits, which reports on investigation show that the vessels are Canadians.

THE LOBSTER FISHERY.

The vessels of the Fishery Protection Service have been very busily engaged enforcing the lobster regulations. On the south-east coast of Nova Scotia to the eastward of Halifax and certain portions of the Prince Edward Island coast, this has been attended with a great deal of trouble and hard work, and although a regulation was adopted taking away the size limit of 9 inches from Prince Edward Island and adopting instead a regulation that the two lower slats in each trap should be $1\frac{1}{2}$ inches apart, the fishermen, whenever an opportunity occurred, continued to fish during the close season which entailed considerable patrolling by the vessels, and a large destruction of traps and other lobster gear found set in the close season, on the south-east coast of Nova Scotia; one vessel was employed nearly the whole season carrying out this law. Fishermen are hardly ever caught in the act of fishing, and the factories on the beach are closed, but the canning goes on in most cases in small shanties in the woods, where it is nearly impossible to catch them in the act.

The system of branding every case with a stamp will do away with a great deal of this illegal fishing, as any one case found without the brand would be liable to seizure. Without a scheme of adequate penalties it will always be perfectly impossible to enforce the provisions for the benefit of the lobster fishery, at the present the largest fine that can be exacted is \$20 or a month's imprisonment, and this is the same if a man has 1 lobster or 100 in his possession.

The marking of trawl buoys I am under the impression would be of very little use, as these buoys are continually going adrift, and would be picked up and used by other people; besides this, in a great majority of instances during the close season no buoys are used at all, but land marks taken on shore and the traps set in line with them, which necessitates the cruisers dragging to find the traps which as can easily be surmised is a very slow business, so that this scheme would not help very much to identify people who are fishing out of season.

I would suggest that a fine be imposed for every individual lobster found in possession in close season.

The lobster catch in Prince Edward Island is slightly in excess of last year owing to 15 days more time to fish in.

THE MACKEREL FISHERY.

The mackerel appeared on the Nova Scotia coast, about the middle of May, they were followed by a small fleet of United States seiners through Scaterie to Cape

North with the Dominion cruiser "Vigilant" in company. During July and August, the following schooners were boarded off the East Point of Prince Edward Island by the Dominion cruisers:—

Name of Vessel.	Tonnage.	Men.	Port of Registry.	Remarks.
Quickstep	99	16	Gloucester	In for water; clean.
H. M. Stanley	112	18	do	do do
Jennie Seaverns	106	18	do	20 barrels.
Eliza Parkhurst	115	20	do	20 do
Nathan Clevis	75	17	Portland	8 do
Martha C.	75	16	do	20 do
Mabel R. Bennett	115	17	Gloucester	Clean.
Ethel B. Jacobs	125	18	do	100 barrels.
Argo	108	18	do	20 do
Lottie Gardner	111	17	do	59 do
Orion	72	15	Georgetown	40 do
J. S. Glover	53	15	Portland	Clean.
G. F. Edmonds	141	18	Gloucester	70 barrels.
H. L. Philips	76	15	do	11 do
Christie Campbell	51	11	do	30 do
Harvard	106	17	do	Clean.
W. H. Wellington	81	17	do	do
Lizzie M. Centre	77	16	do	do
Notice	63	15	do	30 barrels
Herald of the Morning	68	17	do	70 do
J. G. Blaine	98	17	do	40 do
Emma	77	16	Portland	40 do
Marguerite Harkins	97	17	Gloucester	60 do
Norumbega	120	18	do	90 do
Herbert M. Rogers	73	16	do	Clean.
David Sherman	67	14	do	30 barrels.
Landseer	94	17	do	Clean.
Alver	97	16	do	10 barrels.
Lucille	99	17	do	50 do
Fredonia	109	17	do	40 do
Nellie M. Davis	85	15	do	80 do
Romana	82	17	do	21 do
G. W. Peice	59	16	Portland	Clean.
S. F. Maker	103	17	Gloucester	40 barrels.
Dawn	48	17	do	From Labrador with lobsters.
Senator Lodge	94	17	do	150 barrels.
Josemite	115	17	do	113 do
Hattie Worcester	112	17	do	50 do
Marie S. McKie	68	10	Charlottetown	10 do
Minnie Maud	85	17	Liverpool	10 do
Christie Campbell	51	11	Gloucester	200 do
M. H. Parkins	72	14	do	175 do

Most of these vessels did very much better before going home, the greater quantity of the fish were caught off Prince Edward Island and Cape Breton coasts; there was good fishing off the Maine coast, so the number of vessels were smaller than usual.

The last of the mackerel vessels arrived at Gloucester between the 14th and 23rd November, having left the Halifax coast a couple of days earlier; they reported a large body of mackerel as passing down along the Nova Scotia shore about the end of May, these mackerel were followed along the Cape shore in the spring as far as Cape North, when they generally leave them, as after passing that point they scatter. The first schools are unusually large fish, they are generally reported to spawn about the Magdalen Islands or North shore of the Gulf. They are seldom seen in the summer and are always found in October on their way out. They generally first see them off Cheticamp and follow them round Cape North and down along the coast of Halifax, where they leave them in the fall during the early part of Novem-

ber. Some of the United States vessels are reported as making good fares off Cheticamp. They saw any amount of mackerel bound south, but the weather about the end of October and beginning of November was too rough to do any seining. Captain Jacobs of the "Ethel Jacobs" got his seine round a very large school off Halifax, about the 10th November, but he burst his seine and only secured about 300 barrels. These were large mackerel.

During the summer United States vessels did very little in the Gulf as the fish did not show up. Some half dozen schooners fished with the hook and line about the Magdalen Islands, they are reported as having made saving voyages. Most of the mackerel taken in the Gulf during the summer are a later school, and smaller run of fish than those taken in the early spring and late fall on the Cape shore, they come into the gulf later and go out earlier than these large fish before mentioned. The big fish all came in and go out by Cape North, while of the later schools a good many come and return through the Gut of Canso.

The spring and fall fishing was quite successful on the Cape shore and upon the shores of the United States, but the summer and North Bay fishery was practically a failure with the New England fleet. The catch of the Gloucester fleet has been about a third larger than last year and the largest for any year since 1887.

The total amount landed by the fleet from the Cape shore was 13,378 barrels, and 3,965 from the North Bay.

At the latter end of October and during November the boarding books show that the following United States vessels were off and about Sydney:—

J. E. Garland,
Sara E. Lee,
Annie Wesley,
A. R. Crillenden,
Elisha Boynton,
Ella G. King,
J. S. Glover,
Norumbega,
Josemite,
Lizzie M. Centre,
J. W. Campbell,
Cecil H. Louis,
George S. Goodwill,

Argo,
Herald of the Morning,
Lewis H. Giles,
Herbert M. Rogers,
Landseor,
Joseph Rowe,
J. W. Campbell,
D. H. Storey,
Henrietta,
Edward Grover,
Charles,
Clara H. Friend.

Most of these vessels had fair fares.

The law as regards the setting of the gill-nets in the day time has been rescinded during the past season, from Cape St. Lawrence in Cape Breton to the United States boundary line; in the gulf the law regarding these nets is still in force and has been observed.

THE NEW STEAMER.

The new vessel being built for the Dominion Government by Messrs. Fleming & Ferguson, of Paisley, Scotland, is meant both for fisheries protection, buoy service, and lighthouse supply. She has the following dimensions: length between perpendicular 180 feet, breadth moulded 31 feet, depth of hold moulded 16 feet, and to the draught 12 feet. She is to be constructed throughout of Siemens-Martin ship steel, and built under special survey of Lloyd's register of British and foreign shipping, to be fitted and equipped in all respects to the requirements of the Imperial Board of Trade and Steamboat Inspection Act of Canada. She has a double bottom running the whole length, including the ballast tanks; main deck to be of steel, cased with pitch pine. Crew's quarters are arranged under the fore-castle deck with space for 18 men. She has steam steering gear. Accommodation for captain and officers are arranged between decks. Hoisting gear consists of one derrick attached to fore-mast, with gear of sufficient strength to hoist 12 tons; one powerful steam winch.

She is wired throughout for electric light, dynamos and all necessary electrical apparatus provided, and also has a search light. The engines are quadruple expansion, designed and of sufficient power to maintain a speed of 12 knots at sea, surface condenser on the latest approved principle, tubes of the best approved make, $\frac{3}{4}$ -inch external diameter, to have two patent water tube boilers to be fired in the latest and most approved manner. Platings and stays of Siemens-Martin steel, and boiler to be of such dimensions as to supply a constant full pressure of steam at 200 pounds per square inch and to give the vessel and maintain the required speed. Her cost will be \$86,686.00.

LIST of United States Vessels which reported at the Customs Office, Port of Canso, during the Year 1893.

Date of Arrival.	Name of Vessel.	Port of Registry.	Tons.	Men.	Whence arrived.	Licensed, L; un-licensed, U.	What in Port for.
1893.							
Jan. 4	Gertie May	Portland	96	7	Portland	U	Harbour for Newfoundland.
do 3	E. A. Perkins	Gloucester	86	14	Gloucester	U	do do
do 11	Bessie M. Wells	do	92	16	Banks	U	Harbour and water, &c.
Feb. 10	E. P. Boynton	do	76	14	Gloucester	U	do do
April 24	Carlton Belle	Booth Bay	132	10	Banks	U	do repairs.
May 5	Elector	Gloucester	115	18	do	L	Ice, bait, &c.
do 8	H. L. Philips	Rockland	76	14	do	L	License, men, &c.
do 10	Grace Davis	Portland	381	7	Boston	Reg	Cargo.
do 13	Elsie M. Smith	Gloucester	106	18	Banks	L	Anchor and sick man.
do 20	H. G. French	do	95	16	Gloucester	L	License, &c.
do 22	May Flower	do	108	18	do	L	Ice, &c.
do 24	Lottie Byrns	Provincetown	92	7	Provincetown	U	Harbour.
do 29	E. B. Campbell	Gloucester	96	14	Gloucester	L	License, bait, &c.
do 29	A. C. Herrick	Boston	94	18	Boston	U	Harbour, water, &c.
do 29	H. M. Stanley	Gloucester	112	18	Banks	U	do do
do 29	E. K. Perkhurst	do	115	17	do	U	do mackereling.
do 30	Ethel Addie	Portland	86	17	Off shore	U	do do
do 30	Miantinomah	Deer Island	73	17	do	U	do do
do 30	Emma	Portland	77	16	do	U	do do
do 30	Lizzie Maud	do	79	16	do	U	do do
do 30	Norumbega	Gloucester	120	18	do	U	do do
do 30	Alva	do	97	17	Gloucester	U	do do
June 1	J. J. Clarke	do	66	15	Off shore	U	do do
do 6	Miantinomah	Deer Island	73	17	do	U	do do
do 6	Argo	Gloucester	106	17	do	U	do do
do 10	Martha C	do	75	16	do	L	Salt and barrels.
do 12	Roger Williams	Booth Bay	56	14	do	U	Harbour, mackereling.
do 14	Iolanthe	Gloucester	70	15	do	U	do do
do 14	Nellie M. Davis	do	89	16	do	U	do do
do 14	Fredonia	do	109	18	do	U	do do
do 14	Canopus	do	68	15	do	U	do do
do 14	G. W. Pearce	Portland	59	16	do	U	do do
do 14	Pendragon	Gloucester	68	16	do	U	do do
do 14	Thos. F. Baird	do	95	16	do	U	do do
do 14	Rush Light	do	63	16	do	U	do do
do 14	A. P. Davis	do	80	16	do	U	do do
do 14	W. H. Cross	do	55	16	do	U	do do
do 14	S. F. Maker	do	103	17	do	U	do do
do 14	J. S. Presser	do	88	16	do	U	do do
do 14	M. R. Bennett	do	115	17	do	L	do do
do 15	Henrietta Francis	Portland	73	16	do	U	do do
do 15	Lilla B. Fernald	do	78	15	do	U	do do
do 15	Hewward	Gloucester	85	17	do	U	do do
do 15	H. L. Beldan	do	117	17	do	U	do do
do 22	M. E. Wells	do	80	14	Gloucester	L	Ice, bait, &c.
do 22	Mayflower	do	108	18	do	L	do do
do 27	H. L. Philips	Rockland	76	14	Banks	L	do do
do 28	Puritan	Gloucester	85	16	do	U	Harbour, provisions.

LIST of United States Vessels which reported at the Customs Office, Port of Canso,
&c.—Continued.

Date of Arrivals	Name of Vessels.	Port of Registry.	Tons.	Men.	Whence Arrived.	If Licensed L; if Unlicensed U.	What in Port for.
1893.							
July	1 H. G. French	Gloucester	95	16	Shelburne	L	Ice, bait, &c.
do	3 M. J. Wells	do	86	14	Gloucester	L	do
do	11 Polar Wave	do	86	16	Banks	U	Harbour and water.
do	17 Carrier Dove	do	82	16	do	U	do do
do	17 D. D. Winchester	do	79	14	do	L	do do
do	25 Hazel Ounita	do	104	18	do	L	Ice, bait, &c.
do	25 Flash	do	65	14	do	L	do
do	25 C. L. Woodbury	do	100	18	Pubnico	L	do
do	4 L. M. Stanwood	do	100	18	Gloucester	U	Harbour.
do	4 M. J. Wells	do	86	14	do	L	do
do	4 Lizzie Griffin	do	102	18	do	L	Ice, bait, &c.
do	4 Eliza B. Campbell	do	95	17	do	L	do
do	6 W. E. McDonald	do	93	16	do	L	do
do	7 Henrietta	do	75	14	do	L	do
do	10 Annie Wesley	do	88	18	do	U	Harbour.
do	15 Lucy Dyer	Portland	87	16	Portland	L	Ice, bait, &c.
do	21 Marathan	Gloucester	65	12	Whitehaven ..	L	Ice, bait, &c.
do	28 Mayflower	do	108	18	Gloucester	L	do
Aug.	4 Polar Wave	do	86	16	Luskett	L	Repairs, &c.
do	4 Edwin B. Holmes	do	67	11	Gloucester	U	Harbour, water.
do	7 M. J. Wells	do	86	14	do	L	Ice, bait, &c.
do	14 E. B. Campbell	do	95	18	do	L	do
do	15 W. E. McDonald	do	93	16	do	L	do
do	17 Lizzie Griffin	do	102	18	do	L	do
do	18 Louisa Polleys	do	69	14	Banks	U	Harbour, water.
do	21 Flash	do	65	14	do	L	Ice, bait, &c.
do	23 Henrietta	do	75	14	do	L	do
do	23 Senator Lodge	do	94	16	do	U	Harbour, water.
do	26 Polar Wave	do	86	16	do	L	Ice, bait, &c.
do	26 Amy Hanson	Boston	108	16	do	U	Harbour, water, &c.
do	26 M. E. Wells	Gloucester	80	14	do	L	Ice, bait, &c.
do	28 Mayflower	do	108	18	Gloucester	L	do
do	30 Louisa Polleys	do	69	14	Banks	U	Harbour, water.
do	30 Marathen	do	65	12	do	L	Ice, bait, &c.
do	30 Monitor	do	102	18	Tusket	U	Harbour, water, &c.
Sept.	18 Georgie Campbell	do	106	18	Banks	L	Tranship, fish.
do	18 H. M. Stanly	do	112	18	do	L	For a sail, water.
do	18 M. J. Wells	do	86	14	Gloucester	L	Ice, bait, &c.
do	18 Norumbega	do	120	18	do	U	Harbour.
do	19 Henrietta	do	75	14	Banks	L	do water, &c.
do	21 Marathan	do	65	12	do	L	Ice, bait, &c.
do	22 Eliza B. Campbell	do	95	18	Gloucester	L	do
do	27 Susan H. Ritchie	New York	513	8	New York	Reg	Cargo coal.
Oct.	2 Flash	Gloucester	65	14	Banks	L	Harbour, water.
do	13 Meteor	do	119	18	do	U	do
do	17 Emd. Juna	do	80	16	do	L	Tranship, halibut.
do	22 J. E. Garland	do	76	13	do	U	Harbour, water.
.....	Loring B. Haskell	Boston	96	16	Gloucester	L	Men, water, &c.
do	30 Columbia	Gloucester	118	18	do	U	Harbour, water, &c.
do	30 Arbutus	do	114	18	Banks	U	do
do	30 Margaret Mathers	do	91	16	do	U	do
do	30 C. L. Woodbury	do	100	18	do	L	do
do	30 S. F. Baird	do	74	13	do	U	do
Nov.	1 Gatherer	do	91	18	do	U	do
do	6 C. F. French	do	61	12	Shelburne	U	do
do	7 Ethel B. Jacob	do	125	17	Off shore	U	Harbour, mackerel.
do	7 Margarita	Beverly	131	18	Banks	L	do water, &c.
do	7 Senator Lodge	Gloucester	94	16	Off shore	U	do mackerel.
do	8 Maud M. Story	do	71	12	Banks	U	do water, &c.
do	8 Mattie Winship	do	71	12	do	U	do do
do	8 A. Ryder	do	73	13	do	L	do do
do	11 Nellie M. Davis	do	89	16	Off shore	U	do do

LIST of United States Vessels which reported at the Customs Office, Port of Canso,
&c.—*Concluded.*

Date of Arrivals	Name of Vessels.	Port of Registry.			Whence Arrived.	If Licensed L; Unlicensed U.	What in Port for.
			Tons.	Men.			
1893.							
Nov. 16	D. D. Winchester....	Gloucester....	79	16	Banks.....	L	Harbour, water, &c.
do 16	Carrie & Annie	Boston.....	90	7	Gloucester....	U	do for Newfoundland.
do 18	Oliver W. Holmes ...	Gloucester....	101	8	do	U	do do
do 18	Carrier Dove.....	do	82	7	do	U	do do
do 18	Greyling.....	do	115	8	do	U	do do
do 20	Sarah E. Lee.....	do	98	18	Banks.....	L	do man sick.
do 20	Geo. S. Boutwell....	do	63	13	do	U	do water, &c.
do 27	Gatherer	do	91	7	Gloucester....	U	do for Newfoundland.
do 30	H. D. Linnell.....	do	89	8	do	U	do do
Dec. 6	Joseph Rowe.....	do	127	9	do	U	do do
do 6	Lottie Gardiner	do	111	8	do	U	do do
do 6	Louisa J. Kenny.....	do	155	9	do	U	do do
do 8	Henrietta.....	do	74	14	do	L	Ice, bait, &c.
do 8	S. F. Baird.....	do	74	14	Banks.....	L	do do
do 11	Commonwealth.....	do	85	6	Gloucester....	U	Harbour for Newfoundland.

LIST of United States Fishing Vessels which entered at the Port of Arichat
during the Season of 1893.

—		Name of Vessels.	Port of Registry.	Name of Master.	Tonnage.
1893.					
May	9	Sch. Henry L. Philips.....	Rockland.....	Carroll.....	76
do	11	do Emma and Ellen.....	Gloucester.....	McIntosh.....	90
do	20	do Lizzie Griffin.....	do.....	Griffin.....	102
do	20	do Essex.....	do.....	Thomas.....	111
do	20	do Flora Dilloway..	do.....	McNeil.....	78
do	23	do Lizzie M. Stanwood.....	do.....	McInnis.....	100
do	26	do Lottie Byrnes.....	Provincetown.....	Hatch.....	92
do	26	do Willie L. Swift.....	do.....	Kemp.....	95
do	26	do Lizzie Griffin.....	Gloucester.....	Griffin.....	102
June	5	do James G. Blaine.....	do.....	Campbell.....	98
do	6	do Edith M. McInnis.....	do.....	McInnis.....	80
do	8	do Gertie Evelyn.....	do.....	McShara.....	81
do	8	do Horace B. Parker.....	do.....	Thomas.....	93
do	8	do Masconoma.....	do.....	Porper.....	92
do	12	do Winona.....	do.....	Cahoon.....	103
do	14	do Addie Winthrop.....	do.....	Pool (outport of St. Peter's).....	73
do	22	do Robin Hood.....	do.....	Bowie.....	88
do	23	do Emma and Ellen.....	do.....	McIntosh.....	89
July	4	do Lizzie M. Stanwood.....	do.....	McInnis.....	100
do	4	do Mary J. Wells.....	do.....	McKay.....	86
do	5	do Edith M. McInnis.....	do.....	McInnis.....	80
do	6	do Lizzie Griffin.....	do.....	Griffin.....	102
do	17	do Masconoma.....	do.....	Porper.....	92
do	17	do Susan L. Hodge.....	do.....	Hadman.....	78
do	17	do Georgie Campbell.....	do.....	Campbell.....	106
do	18	do Winona.....	do.....	Cahoon.....	103
do	18	do David A. Storey.....	do.....	Grant.....	86
do	18	do Gertie Evelyn.....	do.....	McShara.....	81
do	24	do Robin Hood.....	do.....	Bowie.....	88
do	29	do Ada M. Hall.....	do.....	Dower.....	95
Aug.	14	do Masconomo.....	do.....	Porper.....	92
do	15	do Louisa Polleys.....	do.....	McNeil.....	69
do	17	do Fredonia.....	do.....	Greenleaf.....	100
do	21	do Emma and Ellen.....	do.....	McIntosh.....	90
do	24	do Rigel.....	do.....	Dixon.....	107
do	29	do Gertie Evelyn.....	do.....	McShara.....	81
Sept.	8	do Ada M. Hall.....	do.....	Dower.....	95
do	16	do Masconomo.....	do.....	Porper.....	91
do	22	do Lottie Byrnes.....	Provincetown.....	Hatch (outport of St. Peter's).....	92
do	23	do Concord.....	Gloucester.....	Dugas.....	93
do	28	do Willie L. Swift.....	Provincetown.....	Kemp (outport of St. Peter's).....	95
Oct.	10	do Gertie Evelyn.....	Gloucester.....	McShara.....	81
do	30	do Aroostook.....	do.....	Blackburn.....	67
Nov.	16	do Mildred V. Lee.....	do.....	Lee.....	102
Total.....					3,995

LIST of United States Fishing Vessels which visited Sand Point, Shelburne County,
during the Season of 1893.

Date of Arrivals.		Name of Vessel.	Port of Registry.	Tons.	Men.	What in Port for.
1893.						
Jan.	2.	Eben Parsons	Gloucester..	86	15	Shelter.
do	2.	Smuggler	do	64	13	do
do	3.	Smuggler	do	64	13	do second time in ; no change.
do	3.	E. F. Willard	Portland	54	13	do wood and water ; bound home.
do	3.	Viking	Gloucester	62	15	do and water.
do	3.	Mystic	do	78	15	do do
do	3.	Isaac Collins	Provincetown	93	19	do
do	4.	Mary J. Powers	Boston	126	23	do
do	4.	Robert I. Edwards	Gloucester	80	7	do bound home.
do	4.	Frederick Garring	do	67	7	do do
do	4.	Edith M. Prior	do	105	19	do
do	4.	A. M. Burnham	do	60	11	do
do	7.	Edith M. Prior	do	105	19	do
do	7.	Viking	do	62	15	do and repairs.
do	7.	Garfield	do	69	13	do
do	7.	Isaac Collins	Provincetown	93	19	do
do	7.	Smuggler	Gloucester	64	13	do
do	7.	Mary J. Powers	Boston	126	23	do
do	7.	Mystic	Gloucester	78	15	do
do	10.	American	do	118	19	do and water.
do	10.	Eben Parsons	do	86	15	do do
do	10.	Ramona	do	83	17	do
do	12.	Henry L. Philips	Rockland	76	13	do
do	12.	Blanche	Gloucester	79	18	do water, and medical aid for sick man.
do	12.	Isaac Collins	Provincetown	93	19	do 3rd time in.
do	12.	Smuggler	Gloucester	64	13	do do
do	12.	I. E. Garland	do	76	13	do
do	13.	Resolute	do	90	15	do and water.
do	13.	Vesta	do	75	14	do do
do	13.	Penobscot	do	85	15	do wood and water.
do	13.	Arthur Binney	Boston	112	22	do and repairs.
do	18.	Lizzie B. Adams	Gloucester	58	14	No fish, bait spoiled.
do	18.	William H. Wellington	do	81	15	Shelter and water.
do	18.	Arthur Binney	Boston	112	22	do 2nd time in.
do	20.	Ramona	Gloucester	83	17	do do
do	20.	J. H. Carey	do	95	17	Repairs.
do	20.	Smuggler	do	64	13	Short of provisions.
do	21.	Arthur Binney	Boston	112	22	Shelter, 3rd time in.
do	30.	Mayflower	Gloucester	108	7	do and stores.
Feb.	1.	Arthur Binney	Boston	112	22	do
do	2.	Golden Hope	Gloucester	101	7	do and stores.
do	4.	Arthur Binney	Boston	112	22	do 2nd time in.
do	7.	E. F. Willard	Portland	54	15	do repairs and water.
do	8.	Maggie and May	Gloucester	115	7	do and stores.
do	8.	Thos. F. Bayard	do	96	16	do
do	8.	William H. Wellington	do	81	15	do
do	10.	Maggie McKinzie	do	161	11	do stores and water.
do	10.	Arthur Binney	Boston	112	22	do 3rd time in.
do	11.	J. E. Garland	Gloucester	76	13	do
do	11.	Annie C. Hale	Boston	84	17	do and repairs.
do	11.	Penobscot	Gloucester	85	15	do
do	11.	Thos. F. Bayard	do	96	16	do 2nd time in.
do	15.	Penobscot	do	85	15	do do
do	15.	Annie C. Hall	Boston	84	17	do do
do	15.	Thos. F. Bayard	Gloucester	96	16	do 3rd do
do	15.	Norumbega	do	120	7	do repairs and stores.
do	15.	Lizzie B. Adams	do	56	13	do
do	20.	Hiram Lowell	Gloucester	120	21	do &c.
do	20.	Arthur Binney	Boston	112	22	do
do	21.	Penobscot	Gloucester	85	15	do 3rd time in.
do	21.	Arthur Binney	Boston	112	22	do 2nd do
do	21.	Hiram Lowell	Gloucester	120	21	do 2nd do
do	21.	Penobscot	do	85	15	do 4th do

LIST of United States Fishing Vessels which visited Sand Point, &c.—Continued.

Date of Arrivals.	Name of Vessel.	Port of Registry.	Tons.	Men.	What in Port for.
1893.					
Feb. 23.	Arthur Binney	Boston	112	22	Shelter, 3rd time in.
do 24.	Jas. A. Garfield	Gloucester	69	13	do and repairs.
do 24.	Nellie S. Thruston	do	81	15	do
do 25.	Arthur Binney	Boston	112	22	do 4th time in.
do 25.	Hiram Lowell	Gloucester	120	21	do 3rd do
do 25.	W. H. Wellington	do	81	15	do
Mar. 1.	Penobscot	Boston	112	22	
Feb. 27.	Arthur Binney	Gloucester	85	17	
Mar. 1.	James & Ella	do	85	17	do
do 2.	do	do	85	17	do 2nd time in.
do 2.	do	do	69	13	do 3rd do
do 2.	Jas. A. Garfield	do	95	17	do 2nd do
do 3.	Thos. F. Bayard	do	95	17	do 2nd do
do 3.	James & Ella	do	85	17	do 3rd do
do 3.	Jas. A. Garfield	do	69	13	do and repairs.
do 3.	Meteor	do	119	19	do and stores.
do 3.	Ellen Lincoln	Portland	92	7	
do 6.	Jas. A. Garfield	Gloucester	69	13	Repairs.
do 11.	Lizzie M. Stanwood	do	100	18	Shelter and repairs.
do 15.	Lissie I. Greenleaf	Gloucester	88	17	do and medical aid for sick man.
do 16.	Arthur Binney	Boston	112	22	do
do 17.	Rolette	Gloucester	79	17	do
do 20.	Joseph B. McGuire	do	88	17	do
do 20.	Arthur Binney	Boston	112	22	do
do 23.	Ada M. Hall	Gloucester	95	9	Came in to take out license and ship 7 men.
do 24.	Spring Bird	do	76	13	Shelter.
do 24.	Lissie B. Campbell	do	95	17	do
do 28.	Howard Holbrook	do	92	15	do and water.
do 28.	Reub. L. Richardson	do	92	17	do
do 28.	E. F. Willard	Portland	54	13	do
do 30.	Edward Groves	Gloucester	73	14	do and to ship a man.
do 30.	Jessie M. Calderwood	do	86	11	do do part of crew.
do 30.	Sarah E. Lee	do	96	8	do license and to ship men.
do 30.	Arthur Binney	Boston	112	18	do and to ship men.
do 30.	Annie C. Hall	do	84	15	do
April 1.	Bessie M. Wells	Gloucester	92	15	do
do 1.	Wm. E. McDonald	do	93	17	do
do 1.	E. F. Willard	Portland	54	18	do 2nd time in.
do 1.	Mayflower	Gloucester	108	17	do
do 1.	Hattie E. Worcester	do	112	19	do
do 1.	Arthur Binney	Boston	112	22	do 2nd time in.
do 1.	Annie C. Hall	do	84	15	do do
Mar. 30.	Ella G. King	Gloucester	71	13	do and for license to ship men.
April 1.	Glorianna	do	110	17	do
do 4.	Evered Pierce	do	64	13	do
do 4.	Blanche	do	80	15	do and repairs.
do 4.	American	do	118	19	do do
do 4.	Quickstep	do	109	17	do do
do 4.	Arthur Binney	Boston	112	22	do 4th time in.
do 5.	do	do	112	22	do 5th do
do 6.	Emma M. Dyer	Gloucester	77	15	do
do 6.	Evered Pierce	do	64	13	do 2nd do
do 6.	Caveara	do	59	13	do
do 6.	J. H. Cary	do	95	17	do
do 15.	Ella M. Doughty	Portland, Me.	71	13	do
do 20.	Arthur Binney	Boston	112	22	do and repairs.
do 21.	Ramona	Gloucester	83	17	do
do 25.	Lucy W. Dyer	Portland, Me.	78	15	In for shelter and to ship two men.
do 28.	Hattie L. Vewman	Gloucester	93	13	do and repairs.
May 8.	Frank A. Ratcliff	do	99	13	do do
do 13.	Henrietta Frances	Portland, Me.	73	16	do
do 13.	Arthur Binney	Boston	112	22	do
do 13.	Helen S. Wells	Gloucester	90	15	do
do 15.	Henrietta Francis	Portland, Me.	73	15	do and water.

LIST of United States Fishing Vessels which visited Sand Point, &c.—*Continued.*

Date of Arrivals.		Name of Vessels.	Port of Registry.	Tons.	Men.	What in Port for.
1893.						
May	16..	Welcome.....	Gloucester....	58	12	In for shelter, wood and water.
do	18..	M. S. Ayer.....	do	76	15	Shelter.
do	18..	Eleazar B. Parker.....	do	115	17	do
do	18..	Jennie Leverus.....	do	106	15	do and repairs.
do	19..	Thos. F. Bayard.....	do	95	15	do and water.
do	19..	Mabel Woolford.....	do	104	17	do repairs and water.
do	19..	John W. Plummer.....	Portland, Me.	95	15	do
do	19..	Ramona.....	Gloucester	83	15	do
do	19..	Maud B. Wetherell.....	Portland, Me.	102	15	do and water.
do	19..	Quickstep.....	Gloucester....	99	15	do
do	20..	Hereward.....	do	85	16	do and water.
do	20..	Wetherell.....	Portland, Me.	102	15	do
do	20..	Grayling.....	Gloucester	115	17	do
do	20..	Stowell Sherman.....	Provincetown.	87	16	do
do	20..	Ambrose H. Knight.....	Gloucester....	87	15	do
do	20..	Norumbega.....	do	120	17	do
do	20..	Abbie F. Morris.....	do	77	15	do
do	20..	Grace Furnald.....	Portland	76	15	do
do	21..	Andrew Burnham.....	Boston	86	15	do
do	21..	Agusta Harrick.....	do	86	15	do
do	21..	Geo. S. Edmunds.....	Gloucester....	141	17	do
do	22..	Ethel B. Jacobs.....	do	125	17	do
do	22..	J. S. Glover.....	Portland, Me.	53	15	do and repairs.
do	22..	Herbert M. Rogers.....	Gloucester	73	15	To ship man here.
do	22..	Arthur Binney.....	Boston	112	22	Shelter.
do	22..	Emma.....	Portland	77	15	do
do	26..	Roger Williams.....	Booths Bay Hbr	53	15	do
do	26..	J. S. Glover.....	Portland	53	15	do
do	29..	Laura Nelson.....	Gloucester....	85	15	do and water.
do	29..	J. S. Glover.....	Portland	53	15	do
June	15..	Jennie Severns.....	Gloucester....	106	15	do and water.
do	17..	Herbert M. Rogers.....	do	7	15	do
do	17..	Arthur Binney.....	Boston.....	112	22	do
do	19..	Arthur Binney.....	do	112	22	do
do	20..	Alva.....	Gloucester....	7	15	do
do	20..	M. S. Ayer.....	do	76	15	do and water.
do	20..	Hereward.....	do	85	16	do
do	20..	Gleazar B. Parker.....	do	115	17	do
do	24..	Henry G. French.....	do	95	15	do bait and ice.
July	8..	Masconomo.....	do	91	17	Seeking bait and ice.
do	8..	Alena L. Young.....	Rockland, Me.	25	8	Shelter.
do	13..	Bertha M. Miller.....	Gloucester....	42	11	Bait, ice and water.
do	13..	Alena L. Young.....	Rockland, Me.	25	8	To buy bait and ice.
do	17..	Clara L. Friend.....	Gloucester....	61	13	do
do	21..	Alena E. Young.....	Rockland, Me.	23	8	do bait and ice.
do	21..	Arthur Binney.....	Boston.....	112	22	do
do	21..	Herbert M. Rogers.....	Gloucester....	73	15	do and water.
do	25..	Hattie Maud.....	Portland	86	17	do water and to land one of his crew.
do	27..	Alena E. Young.....	Rockland	23	8	do bait and ice.
do	27..	Maggie E. Wells.....	Gloucester....	80	15	do and bait.
Aug.	3..	Alena E. Young.....	Rockland.....	23	8	do
do	5..	Edith M. McInnis.....	Gloucester....	80	17	do bait and ice.
do	10..	J. W. Collins.....	do	74	15	do do
do	11..	Gov. Butler.....	do	87	15	do do
do	12..	Lusie M. Calderwood.....	do	86	15	do do
do	19..	Winona.....	do	103	17	do and bait.
do	22..	Robin Hood.....	do	88	15	do do
do	23..	Hattie Maud.....	Portland	86	15	do
do	23..	Lilian E. Vorwood.....	Gloucester....	75	15	do
do	23..	Chas. S. Tupper.....	do	68	13	do
do	25..	Caviara.....	do	59	13	do
do	26..	J. W. Campbell.....	do	79	13	do and water.
Sept.	8..	Henry S. French.....	Gloucester....	95	15	do and bait.
do	8..	Norumbega.....	do	120	17	do

List of United States Fishing Vessels which visited Sand Point, &c.—*Continued.*

Date of Arrivals.	Name of Vessels.	Port of Registry.	Tons.	Men.	What in Port for.
1893.					
Sept. 8.	Alice Ramond	Rockland	65	11	Shelter.
do 8.	Hattie Maud	Portland	86	15	do bait, ice and repairs.
do 13.	Sara E. Lee	Gloucester	98	17	do and to ship two men.
do 14.	Pola Wave	do	86	15	do bait and ice.
do 26.	Magnolia	do	108	17	do and water.
do 27.	Rigel	do	107	17	do
do 27.	Caviare	do	59	13	do
do 29.	do	do	59	13	do 2nd time in.
do 30.	Rigel	do	107	17	do
do 30.	Indiana	do	116	21	do
Oct. 10.	Alva	do	97	16	do
do 12.	James & Ella	do	85	17	do
do 13.	Strange	do	82	5	do
do 24.	Hiram Lowell	Booth Bay	120	19	do
do 24.	Carrie E. Parsons	Gloucester	80	15	do
do 24.	Elzear B. Parker	do	115	19	do
do 24.	Mary Chisholm	do	66	12	do and water.
do 24.	Lelia E. Norwood	do	74	11	do
do 25.	M. B. Stetson	Provincetown	114	19	do
do 25.	Telisman	Gloucester	118	21	do
do 14.	Vesta	Gloucester	75	13	do
do 16.	Emma E. Whetherell	Boston	109	18	do
do 16.	Mary F. Chisholm	Gloucester	66	12	do and repairs.
do 16.	Ethel	do	68	11	do and water.
do 16.	Merchant	do	68	12	do do
do 16.	J. W. Campbell	do	79	15	do
do 18.	Winona	do	103	17	do and repairs.
do 21.	Lelia E. Vorwood	do	74	11	do water and to land sick man.
do 31.	Nerid	do	92	17	do
do 31.	E. F. Willard	Portland	54	14	do
do 31.	Margaret Mather	Gloucester	91	15	do
Nov. 8.	Eleazer B. Parkerest	do	115	17	do and repairs.
do 9.	American	do	118	19	do
do 9.	Amy Hamson	Boston	103	17	do
do 13.	Harel Onieta	Gloucester	104	15	do
do 15.	Ramona	do	83	17	do
do 15.	Shenandoah	do	105	17	do
do 16.	Penobscot	do	85	15	do water and repairs.
do 16.	E. F. Willard	Portland	54	13	do
do 16.	Ralph E. Eaton	Gloucester	68	12	do and repairs.
do 16.	S. P. Willard	do	121	19	do
do 16.	Agusta E. Harrick	Boston	94	7	do
do 16.	M. B. Stetson	Provincetown	114	19	do
do 17.	Mabel Kenniston	Gloucester	78	15	do
do 17.	A. T. Gifford	do	81	15	do
do 17.	Arthur Binney	Boston	112	22	do and repairs.
do 18.	Quickstep	Gloucester	99	19	do
do 18.	Ramona	do	83	17	do second time in on this trip.
do 18.	Penobscot	do	85	15	do second time in.
do 18.	A. R. Crittenden	do	81	15	do
do 18.	Roulette	Boston	79	17	do
do 18.	Wm. H. Oaks	Gloucester	67	11	do and water.
do 24.	John M. Plummer	Portland	95	15	do
do 24.	J. H. Carey	Gloucester	95	15	do
do 24.	Emma E. Whitherell	Boston	109	19	do
do 24.	Janie B. Hodgsdon	Gloucester	120	19	Short wood, water and provisions.
do 24.	Vigilant	do	87	17	Shelter.
do 25.	Cecel H. Low	do	75	15	do
do 25.	Elsie M. Smith	do	106	17	do
do 25.	Maud B. Wetherell	Portland	102	18	do
do 25.	Falcon	Gloucester	62	11	One of crew dead; came in to bury him.
do 23.	E. T. Willard	Portland	54	13	Shelter and water; third time in.
do 23.	Roulette	Boston	79	15	do do
do 23.	Ramona	Gloucester	83	17	do do

LIST of United States Fishing Vessels which visited Sand Point, &c.—*Continued.*

Date of Arrivals.	Name of Vessel.	Port of Registry.	Tons.	Men.	What in Port for.
1893.					
Nov. 24.	Mabel Kenniston	Gloucester	78	15	Shelter ; fourth time in.
do 24.	Resolute	do	83	17	do
do 24.	Abbie Deering	do	96	17	do second time in.
do 24.	Fannie A. Spurling	do	81	15	do do
do 24.	Rigel	do	107	19	do
do 24.	Penobscot	do	85	15	
do 24.	John E. McKinzie	do	124	21	do do
do 20.	Ramona	do	83	17	do
do 20.	Quickstep	do	99	19	do
do 20.	Penobscot	do	85	15	do
do 20.	Mary J. Wells	do	86	13	do
do 21.	Abbie M. Darling	do	96	17	do
do 22.	Jhn. E. McKenzie	do	124	21	do
do 22.	Valkyria	do	132	9	do
do 23.	Mabel Kenneston	do	78	15	do
do 23.	Rigel	do	107	19	do
do 23.	Quickstep	do	99	19	do
do 18.	Rigel	do	107	19	do and repairs.
do 18.	Wm. H. Oakes	do	69	13	do and water.
do 20.	E. F. Willard	Portland	54	13	do
do 18.	Arthur Binney	Boston	112	22	Had to go to Halifax for repairs.
do 20.	T. F. Gifford	Gloucester	81	15	Shelter.
do 20.	L. P. Willard	do	121	19	do
do 20.	Mabel Kenneston	do	78	15	do
do 20.	Fannie A. Spurling	do	81	15	do
do 20.	Rigel	do	107	19	do
do 20.	Roulette	Boston	79	15	do
do 29.	J. E. Garland	Gloucester	76	13	do
do 29.	Elsie M. Smith	do	106	19	do and water.
do 29.	Abbie M. Deering	do	96	17	do
do 29.	Rigel	do	106	17	do
do 29.	Penobscot	do	85	15	do
do 30.	Orion	do	89	7	To buy lumber and repairs.
do 30.	Arbutus	do	114	9	do
do 30.	Vigilant	do	87	17	Shelter.
do 30.	Edith M. Prior	do	105	19	do
do 30.	Laura Bell	Portland	77	17	Went to Shelburne for repairs.
do 30.	Quickstep	Gloucester	99	19	
do 27.	Annie & Mary	do	68	13	Shelter and water.
do 27.	J. E. Garland	do	76	13	do do
do 28.	Abbie Deering	do	96	17	do
do 28.	Orient	do	89	15	do
do 28.	Rigel	do	106	17	do
do 28.	Elsie M. Smith	do	106	19	do
do 28.	Mystery	do	113	7	To purchase lumber.
do 28.	Davie Crocket	do	80	7	In to buy lumber.
do 28.	Alice Lawson	do	127	9	Water and to buy lumber.
do 28.	Lottie Gardner	do	115	9	To buy lumber.

NAME of Vessels Reported at the Outport of Souris, summer 1893.

Name of Vessels.	Port of Registry.	Tonnage.
Schooner Martha C.	Gloucester, U.S.	75
do Jennie Severns.	do	106
do Hattie E. Worcester.	do	112
do J. S. Glover.	Portland, U.S.	53
do Notice.	Gloucester, U.S.	63
do Christie Campbell.	do	51
do David Sherman.	do	68
do Hattie M. Graham.	do	133
do Emma.	do	77
do Geo. F. Edmunds.	do	141
do Eliza H. Parkhurst.	do	115
do Nellie M. Davies.	do	89
do Lottie Gardiner.	do	111
do H. M. Standly.	do	112
do Quickstep.	do	99
do Herbert M. Rogers.	do	73
do W. H. Wellington.	do	81
do Landseer.	do	94
do Alva.	do	97
do Luciella.	do	99
do Mable R. Bennet.	do	115
do Ethel B. Jacobs.	do	125
do Argo.	do	108
do Harvard.	do	106
do S. F. Maker.	do	103
do Geo. W. Peirce.	Portland, U.S.	59
do Senator Lodge.	Gloucester, U.S.	94
do Norembega.	do	120
do Lizzie M. Center.	do	77
do Jas. G. Blaine.	do	98
do Yosemite.	do	115
do Ramona.	do	83
do M. H. Perkins.	do	72

PRIZES FOR MODELS.

The occurrence of disasters to fishing schooners are so numerous and frequent, it was deemed desirable that public attention should in some way be directed towards ascertaining the cause, the general opinion is that the disasters are mostly due to the faulty model on which the vessels are constructed in the endeavour to make them both fast sailing and good freight carriers. For this reason the Government offered two prizes, the first prize \$400 and the second prize \$200, for designs of vessels from 70 to 100 tons—design to be judged by a board. The Custom-house officers at Gloucester, United States, and Yarmouth, Great Britain, were written to with the request that they should forward to the department any information they were able to give with regard to the description and models of vessels which followed deep-sea fishing. The collector at Gloucester answers, that the Gloucester fishermen think a vessel of about 100 tons, length 90 feet, breadth 23 feet 6 inches, depth 11 feet 8 inches, is best adapted for a deep-sea fishing, costing, with appurtenances, when ready for sea, about \$10,000. The collector at Yarmouth, Great Britain, answers: "As regards the smacks (commonly called the life-boats of the North Sea by reason of the large number of lives annually saved by them) there has been a continual tendency in recent years to increase their size, and the average smack now runs to 60 tons or more—vessels engaged in fleeting and being absent from port for some eight weeks being somewhat larger still." From information received from these two officers, it was ascertained that the model of fishing vessel both in Great Britain and United States, is deeper than the Canadian vessel. Twenty-one United States vessels, taken as they come on the list, average 110 tons register and 12 feet 7 inches draught of water when loaded; a like number of Canadian vessels average 91 tons

register and only draw 11 feet 4 inches. Lunenburg vessels are compromise models, being an endeavour to construct a vessel which shall be both a freight carrier and a fishing vessel.

With the intention of endeavouring to obtain the best model possible, the following advertisement was inserted:

A parliamentary grant having been voted for the purpose, a first prize of \$400 and a second prize of \$200 will be given for the best half model of a fishing schooner most suitable for North Atlantic bank fishing, which could also be used in the West India trade during the winter, competition open to Canadians only, until 2 p.m., on 7th June, 1893.

In response to this, 22 models were sent to the department. The report of the judges was: "Many of the models were not accompanied by the specifications required by the department."

The judges have carefully considered the demand for safety, as well as the other requirements.

They have no hesitation in awarding to No. 14 in the collection, the first prize for design, specification and working detail, all of which are highly recommended.

While there are several of nearly equal merit among the remainder, No. 5 seems to them to be the most deserving of second prize, and they therefore so award. While it is larger than usual for the purpose intended, it has been awarded the second prize for general excellence of design.

Numbers 2, 6 and 11 deserve honourable mention, being carefully prepared, and of good design.

Numbers 7 and 13 deserve special mention as good designs for speed, yet wanting in other qualifications.

It seems that if our fishing vessels would adopt the plan of carrying a sufficient amount of ballast, securely fastened, so that it could not be readily removed, it would conduce to their safety, as many get rid of needful ballast, to make room for the fish they expect to catch, and are often caught in a gale afterwards, with serious results.

They have noticed in some of the sail plans submitted with the models a disposition to overspar many of the fishing vessels. From their personal experience and observation they are led to agree that overmasting is in too many cases responsible for the disasters that occur so often to that class of vessels. Experience has proved that many of our vessels will sail quite as fast after their sail plan has been reduced, and are much safer.

We are pleased to notice that the tendency of the builders of to-day is to increase the dead rise of their vessels, thus giving them more draft of water, and increasing their stability. The judges do not consider that they will be overstepping their duty if they commend the department for the interest manifested in securing the safety and comfort of the men who contribute so largely to the prosperity of the country, and whose calling is one of extreme danger.

Prizes awarded to—

1st Prize—Mr. Robie McLeod, Liverpool, N.S., \$400.

2nd Prize—Mr. M. L. Oliver, Digby, N.S., \$200.

Honourable mention for carefully prepared and good design:—

Mr. George Henderson, Douglstown, N.B.

Mr. J. H. Carl, St. John, N.B.

Mr. Solomon Mirash, Lunenburg, N.S.

Special mention for speed:—

Mr. George Washbourne, St. John, N.B.

Mr. N. S. Taylor, Shelburne, N.S.

FISHERIES' INTELLIGENCE BUREAU.

This bureau has again proved of value in enabling fishermen to keep track of the movements of the fish, and a valuable quantity of information will be gathered in time.

It is proposed to issue a chart showing the whereabouts of the fish at different times during the three years the Fisheries Intelligence Bureau has been in operation. This will be of great assistance to the fishermen, showing more or less exactly where fish may be expected to be met with at different periods during the season.

Mr. Hutchins, the officer in charge of the head office of the Fisheries Intelligence Bureau, at Halifax, has performed his duties in a very satisfactory manner. He reports on the movements of fish during the season. (See Appendix No. 4.)

Appended is a list of the reporters.

The whole respectfully submitted.

O. G. V. SPAIN,
Commander.

LIST of Reporters employed by the Fisheries Intelligence Bureau.

Residence.	Name.	Residence.	Name.
Alborton, P.E.I.	J. P. Brennan.	Mabou, C.B.	Louis McKeen.
Arichat, C.B.	R. Benoit.	Magdalen Islands	J. A. Le Bourdais.
do (west)	C. P. Le Lacheur.	Malpeque, P.E.I.	J. M. McNutt.
Bayfield, N.S.	E. G. Randall.	Margaree, C.B.	M. A. Dunn.
Beaver Harbour, N.B.	E. W. Cross.	Meat Cove, C.B.	Alex. B. McDonald.
Bloomfield, P.E.I.	John Doyle.	Musquodoboit Harbour, N.S.	Geo. Rawlings.
Campobello, N.B.	A. J. Clarke.	New Port Point, Que.	Mrs. Meunier.
Canso, N.S.	Thos. C. Cook.	North Sydney, C.B.	A. G. Hamilton.
Caraquette, N.B.	Miss Louise C. Black-hall.	Paspebiac, Que.	Miss Laura Young.
Cheticamp, C.B.	S. Aucoin.	Percé, Que.	Miss Ada Beck.
D'Escousse, C.B.	R. F. Bourke.	Petit de Grat, C.B.	P. T. Fougere.
Digby, N.S.	J. M. Viets.	Point St. Peter, Que.	Mrs. P. Bond.
Escuminac, N.B.	Mrs. H. W. Phillips.	Port Hood, C.B.	Edward D. Tremain.
Freeport, N.S.	Isaiah Thurber.	Port La Tour, N.S.	J. W. Taylor.
Gabarus, C.B.	R. McLean.	Port Medway, N.S.	E. E. Letson.
Gaspé, Que.	J. J. Annett.	Port Mulgrave, N.S.	David Murray.
Georgetown, P.E.I.	Chas. Owen.	Pubnico, N.S.	J. A. Dentremonet.
Grand Manan, N.B.	E. A. Calder.	Salmon River, N.S.	J. H. Whitman.
Grand River, Que.	Miss M. A. Carberry.	Sand Point (Shelburne Co.), N.S.	R. H. Bolman.
Hawkesbury, C.B.	J. C. Bourinot.	Seven Islands, Que.	P. E. Vignault.
Ingonish, C.B.	E. B. Burke.	Shippegan, N.B.	Mrs. A. Hamon.
Isaac's Harbour, N.S.	S. R. Giffin.	South-west Point, Anticosti.	Miss Grace Pope.
L'Ardoise, C.B.	John McIsaac.	Souris, P.E.I.	W. C. Henley.
Liverpool, N.S.	J. H. Dunlop.	Spry Bay, N.S.	D. McAulay.
Lockeport, N.S.	Geo. Stalker.	St. Ann's, C.B.	D. Urquhart.
Long Point, Que.	E. S. Vibert.	St. Peter's, C.B.	C. H. Feltmate.
Louisburg, C.B.	P. O. Toole.	Whitehead, N.S.	F. S. Hatfield.
Lunenburg, N.S.	W. A. Zwicker.	Yarmouth, N.S.	

APPENDIX No. 4.

DETAILED REPORT OF THE FISHERIES INTELLIGENCE BUREAU.

MOVEMENTS OF THE FISH.

LOBSTERS.

Magdalen Islands.

SIR,—I have the honour to submit my annual report of the Fisheries Intelligence Bureau for the season of 1893.

Fishing commenced about the 1st of May, but owing to the prevalence of strong easterly winds, the catch was light until the 20th. During this period, fishermen suffered greatly from loss of traps and gear, nearly all traps in Pleasant Bay having been destroyed. From the 15th to 20th, reports from other stations indicated good catches of fair sized fish. The first week of June, the fishing was good in all sections, fish being of larger size than at same time previous year. From June 6th until the close of the season, although the catches were intermittent, the total catch for the season is estimated fair, and compares favourably with previous years.

Quebec.

Gaspé.—The catch for the season was on the average fair.

Point St. Peter.—First appearance reported 2nd May, from which time until the 21st of June the average catch was good. During the latter half of June, bait became scarce, and greatly hindered this fishery; but from 1st July to 15th, fair catches were made daily, and the total catch for the season is considered good.

Percé.—Throughout the months of May and June, the catch was on an average fair, but from 1st July to 15th, very light. Catch for season considered not as good as last year.

Grand River.—Lobsters seemed, as a rule, good during the whole month of May, although a large number of traps were reported destroyed on the 14th. During the first half of June the catch was fair, but none reported afterwards.

Newport Point.—During the first week of May lobsters were quite plentiful, but from that time until the end of June, although some excellent catches were made, the average was only fair, total catch for season being scarcely up to the previous year's.

Paspebiac.—Lobsters were taken as early as 1st May, but bad weather prevented fishing until about the 13th, when light catches were made daily until June 10th. None reported afterwards.

New Brunswick.

Caraquet.—Lobsters first appeared about 15th of May, and fair catches were made daily until the 20th, when rough weather prevented boats from going out. During the month of June the catches were fair, but irregular. Two new factories having been opened at this place the past year (making five in all), the catch is estimated as poor, although it is generally thought that the past season's catch compares favourably with that of previous years.

Miscou and Shippegan.—Lobsters appeared in small quantities about 12th May, during the remainder of which month the catch was fair. During the first two

weeks of June, the average catch was very good, but poor remainder of season. On the whole, the season is not considered a good one; although it opened with good prospects and packers did very well, having a large quantity of herring salted for bait. The lobster fishery, however, soon slackened, and those caught were of a smaller size. There are twenty-four factories in this district, viz.: fourteen on Miscou Island, six on gulf shore off Shippegan Island, and four on the mainland. Each factory has from three to eight boats—two men in a boat, with from 250 to 300 traps per boat. The average pack, this year, of factories, on Miscou and Shippegan Islands, is estimated at about 400 cases each; while those on the mainland would not average more than 275 cases; as the lobsters did not run inside this year, until about the end of the season; when factories might have done well had the close season not arrived,

Point Escuminac.—First appearance 3rd May, from which time until the 8th the catch was very light owing to stormy weather. Between 8th and 22nd the catch was exceedingly good, after which they began to fall off daily, and up to the 15th June the catch was poor. From latter date, until the close of the season, the catch was fair; the whole season's catch being about the same as last year.

Campobello.—First appearance reported 26th May, from which date until 19th June, the average catch was fair.

Beaver Harbour.—Light catches of lobsters were made daily from 1st to 9th of May, after which they were fairly plentiful until the end of the month. During the 2nd week of June, light catches were reported daily, but none afterwards.

Grand Manan.—First appearance reported 7th May, from which date until the end of the month the average catch was fair. On 31st May, they were reported plentiful at Dark Harbour, and on the day following, were plentiful at Grand Manan, when excellent catches were made, there having been 1,200 traps in operation. Total quantity taken estimated at 300 tons.

Prince Edward Island.

Miminegash.—Light catches of lobsters were made from 1st May until the 6th, when they became more plentiful, and fair catches were made daily between Miminegash and North Point, until the 18th when they gradually increased until they were reported plentiful on the 22nd from Campbellton to Kildare, and remained so until the end of the month, when they became again scarce, and remained so until the close of the season. This year's catch compares favourably with last year's, there being about 4,660 cases packed; but taking into consideration the increased plant worked, the average per man and traps has been greatly reduced.

Alberton.—First appearance reported 9th May, from which time until the 18th, but few were taken, although on the 10th they were reported quite plentiful between Miminegash and North Cape. From 18th until 31st, the average catch was fair, when they gradually decreased on western shore and increased at stations on the eastern side. Catches throughout June at all stations were poor and irregular. None afterwards. The past season's work has been exceptionally poor and total catch reported short.

Malpeque.—Appeared first about 6th of May, and were taken in fair quantities throughout the month. On the 20th and 21st boats averaged 700, and on the 29th some boats had 1,700. During the first eight days of June, packers were exceedingly busy and had as many as they could handle; but they slackened off for three days, only to appear in greater quantities when boats averaged 1,200, and for a week taxed the factories to their utmost capacity. From June 19th to 26th the catch was light, owing to windy weather; but from that time until the close of the season the catch was fair. There are six canning factories in this district, and the total catch during the past season is considered better than usual; there being 2,500 cases packed.

Georgetown.—Lobster fishing opened about May 7th, very satisfactorily, and the catch continued good throughout May and the greater part of June; but

towards the end of June it slackened off very considerably, some of the canneries being obliged to close down before 15th. The total catch for the past season is considered in excess of 1892.

Cape Breton.

Port Hood.—Lobsters first appeared about 9th May, and during the succeeding week light catches were made daily, when they became quite plentiful and remained so until the 26th. The catches from this date until the close of the season were fair, although somewhat irregular, from 10th to 26th June. The three factories doing business in this vicinity, are reported to have done a paying business—one firm having paid out \$5,000 for lobsters during the season.

Mabou.—Appeared first about 16th May, and good catches were reported until the second of June, when the catches somewhat diminished, owing to scarcity of bait, and remained so until about the 5th of July, from which time until the close of the season the catch was good.

Margaree.—Lobsters first appeared about the 16th of May, during which month the catches were good. During the first week in June there was a falling off of about 30 per cent, and for the remainder of the season the catch was fair, although at times irregular.

Cheticamp.—Fishing commenced about 15th May, and fair catches were made daily during the month and also from 12th to 16th of June. On 21st June much damage was done to traps and nets, and from that date until the close of the season the catch was light.

Meat Cove.—No lobsters were taken at this station during the season, owing to the great scarcity of bait.

Ingonish.—The season opened comparatively early, fishing commencing about 10th May, although very poor catches were made until about the 1st of June, when they became fairly plentiful and remained so until the close of the season. The total catch for the season is considered better than for the past two years.

St. Ann's.—Lobsters appeared somewhat earlier this year, and although some good catches were made, yet the spring catch was reported a failure. The season's catch, however, has been a fairly successful one.

Louisburg.—Lobsters appeared in fair quantities, as early as 3rd May, and when traps were overhauled on the following day, boats averaged about 250, which is considered a large average for first day. About the 16th, the traps were badly damaged by heavy weather; but from 22nd until the end of the month, good catches were made, although scarcity of bait proved a great drawback. From 1st June to 9th, the catch was small, it being estimated not more than half the previous year's catch to date. From 9th June, to 7th July, the catch was fair, but for the remainder of the month very poor.

Gabarus.—First appearance reported 11th May, and light catches were obtained, and fishermen had set all gear when the heavy weather which set in about the 13th, destroyed many of the traps and resulted in great loss to the packers. On the 20th they again appeared in good quantities, and from the 23rd until the end of the month excellent catches were made daily at Fourchu. From 1st to 14th, the catch was good, and remained fair during the latter half of the month. Throughout July, when bait could be obtained, the catches were rather poor and irregular. Total catch for season about the same as last year.

L'Ardoise.—During the first week of May light catches of lobsters were made daily, when weather became unfavourable and bait scarce until about the 13th, when some excellent catches were made for about a week; and for the remainder of the month and throughout June the catch was on an average fair. During the remainder of the season the catch was light, although it is estimated that the season has been a successful one and the catch in advance of previous years.

St. Peter's.—Lobsters were on an average fair from 3rd May until 20th June, but rather poor and irregular during the remainder of the season on account of storms. On the whole the lobster fishery did not turn out as well this season as in 1892.

Arichat.—Good catches were made during the first four days of May, when a heavy gale destroyed many traps, after which the catch was only fairly good until the 16th of June, from which date until the close of the season the catch was light. Total catch reported well up to the average, and fish were of good size throughout.

West Arichat.—Fishing commenced about 26th April and fairly good catches were made until 15th May, when they slackened to some extent, but afterwards became fair and remained so until 7th June, when the catch was estimated fully 100 per cent better than last year's to date. During the remainder of the month and up to 4th July the catch was very light; the factories closing on latter date owing to scarcity of fish. Notwithstanding the shortness of the season the fishermen did fairly well; the catch being nearly 50 per cent better than last year, and the fish of a good medium size.

D'Escousse.—The lobster catch for the whole season was reported fully up to the previous year.

Petite de Grat.—First report received 1st May indicated lobsters fairly plentiful. From that date to 10th of June the catch was good; when they slackened off. Extension of fishing period was granted to 30th of July, owing to late spring. A very stormy period from 10th to 20th of May destroyed many traps. The total catch has been fair.

Hawkesbury and Judique.—First appearance about 13th May, from which time until about 23rd May the catches were fair, but irregular. On the whole reports show that the Cape Breton lobster catch has been one of the most successful the fishermen and packers have experienced for years.

Nova Scotia.

Bayfield.—Lobsters first appeared on 16th May and during that month the average was fair; but for the remainder of season the catch was light, especially in the third week of June, when heavy north winds drove a number of traps ashore and greatly hindered fishing. It is said that about one-half of the lobsters now canned, in this district, are under the size required by law; and if such law was rigidly enforced the factories would all have to shut down.

Canso.—From the first appearance on 4th May, until 27th June, the average catch, although irregular at times, was fair.

Whitehead.—Fishing commenced about 5th May, but the catches throughout that month and first half of June were very light, owing chiefly to rough weather and scarcity of bait. In the third week of June fishing was fairly good, but none reported afterwards.

Issac's Harbour.—Although fishing did not commence until 15th May, owing to scarcity of fish, it is estimated the total catch for season will be about the same as last year's.

Spry Bay.—First reported about 30th May, when light catches were made. Throughout June the average catch, although somewhat irregular, was good.

Salmon River.—Lobsters first appeared about 4th May, but the catches were poor throughout that month, although the average was somewhat better in June. Total catch estimated about 20 per cent better than 1892.

Musquodoboit Harbour.—First appearance reported 1st May, but few were taken until the 11th, when they became fair, (fishermen averaging \$2.25 per hundred) and remained so until 1st June, when they increased until the 12th, about which time the catches were reported excellent for two weeks. After this the catch was poor.

Lunenburg.—First report received 1st May, indicated fair fishing from which time, until the close of the season the average catch was fair.

Port Medway.—First appearance about 2nd May, during which month and up to 7th June, the average catch was fair, although great loss of traps was experienced about the 3rd week of May, owing to rough weather. From 7th June, until the end of the month the catch was poor.

Liverpool.—Reports received indicated fair catches during first and third weeks, of May and throughout June, although irregular in the latter month.

Lockeport.—Appeared in fairly good quantities 2nd May, and for about a fortnight the catch exceeded that of previous spring; after which time, although taken in fair quantities, were very irregular. Throughout June, the average catch was very fair. It is reported that the total catch for past season has been good, and fish of larger size than usual. The exportation of live lobsters has become quite an industry in this section, the past two years. During the past season 195,000 lobsters were shipped fresh to the United States market, and 30,000 lobsters canned.

Port Latour.—First appearance reported 2nd May, and fair catches were made until the 4th, when many traps were destroyed by gale of that date. After repairs to traps this fishery was vigorously prosecuted, and fishermen found ready sale and aggregated good prices, although the catch was light until latter part of June, when dogfish struck in and fishing ended. The total catch for season is reported about equal to that of last year's, but, as prices ruled higher, the result was more profitable for the fishermen.

Pubnico.—First appearance noted 15th May, during the remainder of which month and first week of June the catch was fair; remainder of season poor. The season's catch is estimated fair.

Yarmouth.—Lobsters, as far as reported, were good during May and first week of June, the trade between Yarmouth and Boston being unusually brisk about 19th May; during the remainder of June, the average catch was fair. During the past season, 36,552 crates, or barrels of live lobsters, valued at \$230,127, have been exported to the United States from Yarmouth. These fish have been smacked from various fishing localities between Yarmouth and Liverpool.

Digby.—Throughout the month of May, the average catch of lobsters was fair, although they were reported late in entering the bay, and traps had not been set above Port Lorne previous to the 17th. From 1st June to 23rd, the catch was good, but few were taken after. The total quantity caught being estimated at 1,821 barrels—100 lobsters to a barrel.

Reports from stations on Bay of Fundy coast say that Nova Scotia lobsters are considered superior in flavour to those caught on the muddy bottom of their own fishing grounds. During the past season, about fifty-four cargoes of live lobsters have been landed at St. John from Nova Scotia, comprising about 393,332 lobsters. Many of these have gone to the canneries along the coast, and others have supplied the retail trade.

HADDOCK.

New Brunswick.

Grand Manan.—The catch of haddock throughout May, June and July, was on an average good, although very irregular in July. About 7th August, they appeared quite plentiful in North Channel, and some good catches were obtained. During same time the fishery was greatly hindered in Long Island Bay, by the prevalence of dogfish. In the first week of September, very fair catches were reported daily, but afterwards became poor and irregular at all stations. Total catch estimated about 1,000 quintals.

Beaver Harbour.—About 29th May, haddock began to strike inshore, but the catches were light until about 6th October, when they became fairly plentiful and remained so until about 7th November.

Campobello.—During latter week of May and throughout June, the average catch was fair.

Nova Scotia.

Digby and Freeport.—The canning of lobsters in this district is being largely replaced by the canning of haddock, which appears to be a much more profitable business. Several of these factories have been put in operation during the past few years, and are meeting with good results. These factories give employment to 40

or 50 men and put up in the vicinity of 250,000 cans annually. The fish are taken in the Bay of Fundy and on Brown's bank, and during the past season the catch has been fairly good. The catch at Freeport being estimated at about 4,000 quintals, and at Digby 581,929 pounds. In addition to this extensive canning business a growing and important market is found in the upper provinces for this fish, there having been in the vicinity of 75,000 fresh haddock exported, viz., St. John, during the past season.

Yarmouth.—During the month of May the catch of haddock was poor and irregular; but throughout June was a fair average.

Pubnico.—Estimated total catch for the season has been below the average, owing chiefly to the scarcity of bait.

Port La Tour.—Very few taken during the season.

Sand Point.—The inshore haddock fishery has been very poor during the past season and fish very small; the total catch being estimated about one-third of previous years; and is to some extent attributed to the great number of trawls constantly set offshore, thus preventing the schools of this fish being in shore as in years past. Although the inshore catch has been a comparative failure, good fishing was obtained on offshore soundings, LaHave and Roseway banks, during the whole season. It is reported that a large number of American fishermen frequent these grounds and during the past season averaged in the vicinity of 300,000 pounds haddock and cod weekly.

Lockeport.—The catch of haddock for the whole season has not been as good as last year, owing to the fact that they did not approach in such large quantities as in former years. Total catch estimated at about 650 quintals, or about half of last season's catch.

Port Medway.—Owing to scarcity of bait the season's catch has been exceedingly poor as far as reported.

Lunenburg.—This fish appeared quite plentifully about 17th June and fair catches were made until about 20th July when bait and fish became scarce. Catch not considered as good as last year.

Musquodoboit.—During the 3rd week of June some excellent hauls were reported, but afterwards they became poor and remained so until the middle of July, when the catches, although very irregular, were fairly good.

Isaac's Harbour.—Owing to the very low prices obtained by fishermen for this fish, the fishery was not prosecuted to any extent—consequently few were caught.

Whitehead.—During the second week of June fair catches were made daily; after which the fishery became poor and irregular. Total catch estimated about 1,000 quintals.

Canso.—Very little was done at this fishery until the first week of November, when the average catch was fair. None reported afterwards.

Cape Breton.

West Arichat.—The total catch of haddock will about reach an average with former years.

Arichat.—Haddock were very late in striking in, and the quantity caught was rather small.

Petite de Grat.—Light catches were made during the latter part of May, the 31st of which month proved very encouraging, there being a catch of 1,000. Throughout June, although some excellent hauls were made, the average was only fair. Total catch estimated about 1,500 quintals.

L'Ardoise.—Total catch for season estimate far below that of former years.

Louisburg.—Catch of haddock during past season very poor, average catch per boat not exceeding 35 quintals. Fish being reported of a very small run.

Margaree.—From latter part of June until second week of October, the catch was poor and irregular. On 16th October, haddock were reported plentiful on grounds, but heavy weather prevented fishing.

Mabou.—Light catches reported during latter part of June and throughout July, when the catches slightly increased until about the 11th, after which none were reported.

Port Hood.—Previous to 15th September, the catches were very light, but after that date they became more plentiful, but only fair fishing was done, owing to the heavy schools of dogfish, which infested the coast and did great damage to trawls. About the second week in October the dogfish began to leave, after which fishing became good.

Prince Edward Island.

The only station on the island at which any catches worthy of note were reported during the season was *Miminegash*, where the total catch compares favourably with last year's, although this fishery is not prosecuted to any extent along this part of the coast.

HAKE.

New Brunswick.

Beaver Harbour.—Good catches were made daily from about the 17th June until 7th July, when they became quite plentiful, and some very good fishing was done until the end of the month. During August, September, October and first week of November, although somewhat irregular, the average catch was good.

Grand Manan.—Small catches were made regularly during last week in May, but averaged fair throughout June. During July some very good fishing was accomplished, especially in the 2nd week, when boats were reported to average 14 quintals. About 8th August, dogfish became very troublesome, but notwithstanding this hinderance, although fishing was irregular, some good catches were taken in North Channel and Long Island Bay. Good fishing was reported throughout September at North Head, and some excellent hauls made at Duck Island and Long Island. October proved much the same as August. On the whole this fishery has been quite successful, and compares favourably with last season's good work. Total catch estimated about 7,000 quintals.

Campobello.—The catch for the whole season is considered very good.

Nova Scotia.

Freeport.—Total catch estimated about 6,000 quintals. Greatly in excess of 1892.

Digby.—Light catches were made during last week of May, but averaged fair throughout June and good throughout July. From 1st August to 26th, the catches, although irregular, averaged fair, when fishing was prevented by bad weather. Good fishing was reported during September, when the fishing again became fair and irregular, and remained so until about 1st October, when light catches were made daily for about two weeks. Total catch for season estimated about 589,690 pounds.

Lockeport.—While hake were seemingly as plentiful as usual, yet the total catch was below that of last year's; fishermen not devoting themselves particularly to this fishery, as prices ruled low. Total catch for season, by bankers and small crafts being estimated about 700 quintals.

Sand Point.—Good offshore during the season—about 700 quintals being landed by small crafts.

Cape Breton.

St. Ann's.—Fair catches reported quite regularly between 20th October and 9th November.

Margaree.—Appeared quite plentiful during the greater part of the season; but owing to the presence of dogfish and scarcity of bait the catch was small.

Port Hood.—Reported scarce during summer but became more plentiful about 15th September, about which time heavy schools of dogfish appeared, driving fish offshore and destroying nets. During 2nd week of October dogfish began to leave, and from that time until the close of season the catch was good.

Mabou.—Hake were reported very plentiful during the month of October, but the weather became so unfavourable that very few were taken.

Prince Edward Island.

Alberton and Miminegash.—Although this fishery is not prosecuted to any great extent in these districts, the average catch is considered fairly good.

Georgetown.—Hake were very scarce during the past season, the total catch having been the smallest for some years past.

SQUID.

Nova Scotia.

As in former years, the only station in Nova Scotia at which any quantities of squid worth mentioning was Canso; although large quantities were taken at Salmon River on 21st July, and were reported plentiful off Beaver Harbour, during the latter week of October. Total catch at Salmon River estimated about 10 per cent in advance of last season. About 4th September they became quite plentiful in Freeport district, and as a result good fishing was accomplished. Bankers arriving at Lunenburg about the same time reported squid quite plentiful on Puerto Banks. At Canso their first appearance was noted about 24th June, and good catches were made during the succeeding two weeks. About 10th July they became quite plentiful on the coast and the large fleet, then awaiting at Canso, obtained fair supplies, although the catches were very irregular. During the 3rd week of August they disappeared, and no catches were reported until 28th October, when they struck in great abundance, the supply becoming greater than the demand.

Cape Breton.

Arichat.—Fair from 12th September until end of month.

Petite de Grat.—Small quantities were taken throughout July, and first week in August, but none reported afterwards until 2nd September, when the catch became good; remaining so until end of October, after which the catches were light.

Gabarus.—About 21st June large quantities of small squid were landed here, but after that date none were taken until October, when some very good catches were made between the 13th and 15th.

Louisburg.—Squid failed to appear this year in as good quantities as last season; boats only obtaining enough for bait on 3rd August. About 13th October they struck in quite plentiful, and some excellent catches were made for about a week.

St. Ann's.—Reported plentiful 19th July, from which date until the 28th fair supplies were taken daily. After this the catch was very light.

Ingonish.—Squid being the chief bait used in this district, were, on an average, exceptionally plentiful during September, October and November, although light and irregular catches were made from 17th July to latter part of August.

Cheticamp.—Exceedingly scarce until 16th October, when they appeared very plentifully; excellent catches being made daily the remainder of month, none afterwards.

Margaree.—Fairly good catches were made about 18th July, but afterwards the catch was very poor.

Port Hood.—With the exception of some good catches made during the last week of July, squid were, as a rule, very scarce until September, when they became quite plentiful, remaining so until end of October.

New Brunswick.

Grand Manan.—Good catches were reported during the 3rd week of August at Flagg's Cove. They again appeared about 1st September in larger quantities and very good catches were made each day for about a week. None afterwards.

Beaver Harbour.—As far as reported squid failed to appear during past season; and herring, of which there was a good supply, met the requirements.

Caraquet.—None reported until latter part of season, when they appeared plentiful.

Anticosti.

South-west Point.—The only report of squid from this district was about 1st week of August, when light catches were made daily. At English Bay they appeared plentiful about 20th October, but none afterwards.

Quebec.

Paspebiac.—Light catches reported during August, and fair throughout September.

Newport Point.—The average catch for the season has been fair, although some excellent catches were made during first weeks of August and October, and third week of September.

Grand River.—An average catch during August, September and October.

Percé.—Good appearance reported 25th July, but on the average the catch was only fair.

Point St. Peter.—Average catch fair from 25th July until end of August. From 18th September until 7th October, they were reported very plentiful, after which time but few were taken.

Seven Islands.—In this district, although very irregular, the average catch was good during second week of August. None reported afterwards.

LAUNCE.

Quebec.

Paspebiac.—Light catches were obtained during the second and third weeks of August. None afterwards.

Seven Islands.—Launce appeared as early as 26th May, during the remainder of which month the catches were good. From 1st July until 12th, the catch was excellent; they then became fair, and on an average good during the remainder of month. Throughout August and September, the catch was very irregular, although at times good.

Long Point.—During the first week of June and first few weeks of July, good catches were made daily, after which time the fishing, although good, was irregular.

Sheldrake.—The catch of launce, although very irregular, was very good throughout June. On 20th July, they were reported very plentiful, between this station and Esquimaux Point, and continued so until the end of August.

Thunder River.—During the last two weeks of July and first week of September, the catches were good, some excellent catches being reported from 20th to 27th July.

Magpie, Moisie and Ste. Marguerite.—The catches of launce at these stations, although very irregular, were fairly good, there being some excellent catches reported at Moisie during the last week of July.

SALMON.

Nova Scotia.

Hall's Harbour.—From an unofficial source, the following information has been obtained in regard to this fishery, at Hall's Harbour. Salmon fishing at Hall's Harbour, during the past few days, has been the best ever known. Some remarkable fine catches have been made. Last Friday, Thorpe & Huntley, took 152 fish; Bolser & Keizer took 75 fish, one of which weighed $42\frac{1}{2}$ pounds. On Sunday, 91 fine large fish were taken in James Houghton's weir in two tides; J. W. Thorpe took 301; Bennett & Sullivan took 96 salmon on Saturday, and 117 on Sunday. Last Saturday, Bolsor & Keizer shipped from Kentville, in ice, for Boston, 1,075 pounds of salmon. In all, about 2,800 pounds of fresh salmon were shipped from Kentville to Boston on Saturday. The total catch on Sunday and Monday aggregated five tons.

Yarmouth.—Light catches were made daily during the first part of May, and varied from fair to poor throughout June.

Sand Point.—From 25th May until 17th June, the average catch was fair and is reported a much better season than for the past five years. It is generally reported that this fishery is improving yearly.

Lockeport.—Light catches latter end of May and throughout June. About 75 fish were taken at West Head during these months in nets and were sold fresh for local use.

Liverpool.—Fair but irregular catches were made during the former part of June.

Port Medway.—Owing to the backward season and rough weather, the spring catch did not come up to that of 1892; but from about the 19th May to 8th of June the average catch was fair.

LaHave.—Salmon were reported more plentiful in LaHave River this year than for many years past, there being good catches repeatedly made.

Isaac's Harbour.—Some light catches reported in June.

Whitehead.—Catch for season estimated about 5 barrels.

Canso.—Very few taken during the season.

Bayfield.—The past season, has been on an average, fair, there being some very good catches made in latter part of June.

Cape Breton.

St. Peter's and Petite de Grat.—Fair catches throughout June.

Ingonish.—The catch of salmon throughout June is considered better than last year. In July there was a falling off in this fishery and it finally closed about the 22nd.

St. Ann's.—Fair catches during first part of July.

Cheticamp.—Fair throughout June, but poor from 1st to 12th July.

Margaree.—Catches varied from fair to good throughout June, and former half of July. Total catch estimated about 20 per cent larger than last year's.

Mabou.—Light catches were made pretty regularly throughout June, and fair in July, the average catch being slightly in excess of last season.

New Brunswick.

Escuminac.—The past season has been a much better one than last; there being good catches made daily from 29th May, to 15th June, and exported in ice to foreign markets. About 16th June they became very plentiful, and remained so until the 3rd July, when excellent catches were made and placed in freezers for winter shipment. From this date until 27th July, when fishing closed, the average catch was fair.

Shippegan.—Average catch for season good.

11*— $6\frac{1}{2}$.

Quebec.

Gaspé.—Light catches were made daily during last week of May, after which the average catch was fair until 10th July.

Seven Islands.—The season's catch is estimated about half that of last year, although some very good catches were made during the first ten days of June. Fair catches were reported irregular during June, and former half of July, at Long Point, St. John's River, Mingan, Moisie and St. Marguerite.

Anticosti.—The only reports received of salmon being taken on the Island of Anticosti, during this season were on the 7th and 8th July, when fair catches were made at Shallop Creek.

HALIBUT.

Nova Scotia.

Digby.—The average catch throughout May and June was fair, there having been a total catch of about 9,000 pounds.

Yarmouth.—Fair catches were made daily throughout May and the first half of June, after which the catches were light. About 24th August, they were reported quite plentiful south-east of Cape Sable, but owing to rough weather and scarcity of bait, no catches were made. It is reported that about all the halibut caught in this district, is in vicinity of Cape Sable, the catches being landed at Cape Island, where they were iced, boxed and shipped through Yarmouth to Boston, where they meet with ready sale.

Lockeport.—All through the fishing season, this fish was found in good quantities on the inshore grounds and banks; the total catch being roughly estimated not less than 40,000 pounds, which were sold to local dealers, by the fishermen, none being exported.

Sand Point.—The average catch from 15th May to 10th June was fair, although none were reported afterwards until about the first week in August, when reports indicated good catches on offshore grounds, LaHave and Roseway banks. During 2nd week of September, good catches were made on eastern part LaHave bank in deep water, and were also reported fair in same locality during last week of November.

Musquodoboit Harbour.—Light catches were made daily from 1st to 13th September, when halibut became fair, but fishing was prevented by stormy weather.

Isaac's Harbour.—Very scarce throughout the season.

New Brunswick.

Grand Manan.—The total catch of halibut will not exceed 10 tons, as this branch of the fishing industry is not pursued here to any great extent.

Escumanic.—The catch of halibut for the whole season has been very poor.

HERRING.

Anticosti.

English Bay.—During the first half of June, good catches were made daily and were reported in great abundance in this vicinity about the first week. Throughout the latter half of June and months of July and August, very few were taken, excepting from 17th to 20th July, when the catches were good. None afterwards.

Fox Bay.—On 29th May, herring struck in off the east end of the Island, and on the 31st, in great abundance at Fox Bay; where they remained until about 3rd June, when they left. They struck in again on the 10th June, and good catches were made daily, when weather permitted, until about the 23rd, when they finally left.

South-west Point.—Few light catches were made during the last week of June, but fair from 12th to 27th July. Good the first week of August, but poor the latter.

Magdalen Islands.

Herring struck in the latter part of April and remained plentiful until about the end of May, during which time some very good catches were made.

Quebec.

Point St. Peter.—The catch of herring, when weather permitted, was good throughout May and first week of June; fair, second week, but poor the remainder. During the first week of July, the catch was good, some boats having seven barrels per night, and thereafter was, on an average, good until 12th August.

Percé.—Herring appeared about 1st May and during the first half of month the average catch was good, but only fair latter half. Good catches were made the 1st week of June, but poor remainder of month. From 9th to end of July very good catches were reported; but during the first week of August, and from 11th to 30th September, the catches were light. Few fair catches were made the first week of October, and few light catches the first week of November.

Grand River.—For the first four days of May, good catches were reported; but for the remainder of the month and first few days of June the catch was fair. From 9th to 13th June the catch was light, but for the remainder of the month and throughout June and July, and for three or four days in August good fishing was reported. Owing to bad weather in October, the only catches made were from the 20th to 24th, when good hauls were made daily; also few good catches the first week of November.

Newport Point.—The average catch of herring from 1st to 17th May was good; but for the remainder of the month and throughout June and July the catch was only fair. No reports of fish taken were received from August to November, when the appearance was good, but fishing prevented by bad weather. Estimated total catch for season, including bait, about 7,000 barrels.

Paspébiac.—Good catches were made throughout May, but poor from 1st June to 1st November, from which time until 14th November some good catches were reported.

New Brunswick.

Caraquet.—Fair catches of herring were made from 1st to 19th May, after which date none were reported until about 20th June, when light catches were made daily for about a week. From 12th to 17th July the catch was fair, and from 19th October, to end of month very good catches of small herring reported daily. The catch of fall herring is reported good, and considered better than for the past two years.

Shippagan.—The catch of herring from 12th to end of May is good; but none taken afterwards until 4th August, when light catches were reported for a few days. The total catch of spring herring is considered good, while the fall catch has been almost a failure.

Escuminac.—Good catches were reported during May, with the exception of a few days, when fishing was prevented by bad weather. From 15th to 20th September, few light catches were reported. On the whole the catch of herring at Escuminac, compares favourably with former years.

Grand Manan.—Struck in 7th May, and fair catches were made to the 13th, when fishing was prevented by stormy weather. From 3rd to 13th June, fair catches were made on Rippings, after which they were reported plentiful, and good hauls of large and fat fish were made for about five days. After this the catch was fair until the 11th, when large net herring were taken in numerous quantities; but the catches during the latter half of July were rather poor, owing to strong tides. On 31st July and 1st August, fair fishing was reported at Indian Beach, boats averaging one barrel large herring. On 9th August, Whale Cove boats were reported

with one barrel each, and on the following day averaged two barrels. Herring again plentiful on Rippings about 12th August, and during the succeeding five days remained in abundance, although no hauls were reported. On the 16th, they became good at Northern and Southern Heads, increasing to very good on the 19th. After a short stormy period they became good at Long Island, where it is reported that 500 barrels, of mixed herring were taken in the weirs, one half of which were suitable for smoking and the balance used for sardines. On 31st August, fair fishing was reported at Bradford's Cove, fair at Dark Harbour, on 1st September, and good at Flagg's Cove on the 2nd. During the four following days they became quite plentiful at Dark Harbour, Flagg's Cove, Two Islands, Long Island and Bancroft Point, varying from good to very good, during remainder of the month. About 4th October, fair catches were made at Cheney's Passage, but good at White Head, Two and Three Islands. Between the 10th and 13th, they became plentiful at Pond Point, and mouth of Grand Harbour, and were reported to be of large size and fine quality. On the 16th they also became plentiful at Long Island and Bancroft Point, and on the 23rd struck in plentifully at Whitehead. During the two following days, stormy weather prevented fishing, but on the 26th good fishing was reported at Big Duck Island, from which date until the close of the season, the average catch was fair. On the whole, the total product of the herring fishery is somewhat below the average, especially in the smoked fish line, and may be summed up as follows:—Pickled herring 3,000 barrels, fresh herring 7,000, the latter including sardines, being entirely for export, and smoked herring 900,000 boxes, or about 40 per cent less than last year's catch. This shortage may be partially accounted for by the exportation of fresh herring previously mentioned.

Beaver Harbour.—Herring struck in about 30th May, and few small catches reported. On 25th July, large herring struck in at Wolf Head, and light catches were made until 12th August, when they became fairly plentiful and fair hauls of large fish were made daily during the remainder of the month. During the second week of September, light catches were reported daily, and from the 21st to 19th October, some excellent hauls were made, fish being of large size.

Prince Edward Island.

Miminegash.—The catch of spring herring was fair. None reported afterwards.

Alberton.—Herring appeared about 5th May in fair quantities, from Alberton to North Cape, and about 9th May became good at all stations between Alberton and Miminegash, there having been very good catches made from 9th to 16th May, and first three days of June, when this fishery was abandoned, as the market was glutted and fishermen could not sell their catches.

Tignish and Bloomfield.—About the same as Alberton.

Malpeque.—Fishing commenced on 20th May, and about 2,000 barrels were taken for home consumption and bait. It is reported that no herring are exported from this station; a much larger quantity could be taken if markets were available.

Georgetown.—Herring appeared as early as 14th April, but no catches were reported until May, when they became very abundant, and remained so throughout the month, the total catch being considered the largest for several years past. On 1st August, herring struck in off Pictou Island, and on 9th September, good catches were made off Panmure Island, and very large schools of small herring were reported off Cape George.

Cape Breton.

Port Hood.—Herring struck in about 9th May, from which date until the end of June, the average catch was fair. Throughout July the catch was poor, and but few taken in September and October, owing to bad weather.

Mabou.—Light catches were made from 17th May to second week of July; the supply being reported sufficient only to meet the requirements for bait.

Margaree.—The catches throughout May, June and July, were light, and the fishery reported quite a failure.

Cheticamp.—Fair catches of herring were made from 17th to 23rd May. Nothing afterwards.

Meat Cove.—The total catch of herring for the past season is far below the average, there having been only fair catches made during the first two weeks of July. Fishermen attribute this failure to the purse seiners which they say break up the schools.

Ingonish.—Herring appeared about 20th May, and few light catches were made during the remainder of that month and first and last few days of June. It is reported that the usual school of fat July herring, which generally visited the bays, failed to appear this year, and it is thought that the lobster fishery, so extensively carried on now, frightens this school of fish out of the bays and they pass outside on deep water.

St. Ann's.—Fishing commenced about 11th May and until 26th May the catch was fair. From 1st to 21st July, although some good catches were made, the catch only averaged fair.

North Sydney.—Throughout May the fishery was good, but very few were taken in June, excepting on the 28th, when some excellent catches were made.

Louisburg.—The catch for the past season has been exceptionally light, owing to stormy weather and the prevalence of dogfish, which literally swarmed on the coast. The only catches made were from 8th to 19th June, last week of July, and first week of August, and these were kept for local use.

Gabarus.—Light catches of herring were made from 10th to last of June. Few were taken during the latter part of July, and from 11th to 16th August. The total catch is considered about the same as last year, but the fish were of small size, and were taken in deep water, none appearing in the bay as in former years.

L'Ardoise.—The catches of herring were reported light from 9th June to end of August and from 14th to 25th September, when heavy weather prevented fishing, and no catches were made until 8th November, when fair catches were made daily until the 12th. On the whole, the catches reported far below that of previous season.

St. Peter's.—During the month of May, herring were netted in great abundance in Bras d'Or Lake, and quite a number of bankers were baited; but the only catches at St. Peter's, worthy of note, were made during the month of June, when fair catches were obtained daily. On 8th November a large run of large fat herring struck inshore from Three Island Cove, and extended to Point Michear; and during that week a large quantity was taken. The total catch for the past season was considered a total failure, and is attributed to the large number of steamers plying inwards and outwards daily, via St. Peter's Canal.

Arichat.—The catch of spring herring was light, and consequently the fishermen did little or nothing in selling bait to bankers. There is, however, less importance attached to the spring, than to the summer fat herring; the catch of which was, this year, much below the average; the only catches worthy of note being from 16th to 23rd September, when very good catches of large herring were reported.

West Arichat.—Herring were first reported about the 1st of June, but the catch was an unusually small one—i. e., men who usually caught from thirty to forty barrels, barely caught a dozen this year. The failure of this fishery has been a sad drawback to the fishermen, many of them are extensively fitted out, as the herring in the bay, being of a prime quality, command a good price and sell readily for cash.

D'Escousse.—The herring fishery commenced about the 1st June, and for the following ten days the catches were light; but about the 26th, fair catches were reported daily, until end of month. During the first half of July, good catches were reported, but none afterwards. The total catch has been about 300 barrels, and is considered fairly good.

Petite de Grat.—Fishing commenced about the 10th June, but the catches throughout the season were light; although fishermen obtained some good catches in deep water. Total catch estimated about 750 barrels.

Nova Scotia.

Bayfield.—Average catch for the season.

Canso.—Herring appeared about the 30th of May, but no catches were reported until the 1st of June, when the catches were light for former half, and fair latter half of month. Throughout July, the average catch was fair, and few light catches were made in August, after which fishing was prevented by stormy weather.

Whitehead.—First catch reported the 8th June, from which date until about the middle of August, light catches were made daily. None taken remainder of the season, owing to stormy weather. Total catch estimated about 850 barrels.

Isaac's Harbour.—The catch for the season has been poor; there having been only from 10 to 20 barrels of fat July herring taken per man. The schools of fall herring did not strike in as formerly, and the total catch in this district, it is reported, will not exceed 25 barrels. The fish were of good quality, and as they were well cured, are giving good satisfaction to buyers. It is reported that fishing in this district is decreasing each year, owing to the fact that fishermen prefer working in the gold mines, and as a consequence, more attention is given to this fishing industry by fishermen of Drum Head, Seal Harbour, Coddles Harbour, New Harbour, Island Harbour and Fishermens' Harbour, all of which are within a radius of six miles of Isaac's Harbour.

Salmon River.—Total catch about 10 per cent better than previous year.

Spry Bay.—Herring appeared about 3rd June, and fair catches were made throughout the month. None reported afterwards.

Musquodoboit Harbour.—Fishing commenced about 15th of June, and a few light catches were made during the remainder of the month. Throughout July the catch averaged fair, but again fell to poor during first half of August, and none were taken until September, when good catches were reported daily until the middle of the month.

Lunenburg.—Herring appeared about 30th May, and throughout the month of June the catches varied from fair to good. About 30th June, fine schools of herring were reported striking in at Prospect and St. Margaret's Bay. From 1st to 29th of July the catch was fair, when the summer school struck in and were taken in fair quantities for about a week, after which some excellent hauls were made until bad weather prevented fishing. The catches taken during former part of month were reported to be of large size and excellent quality. From 1st to 23rd of September the catch was fair. None reported afterwards owing to stormy weather.

Port Medway.—Herring appeared about 28th June, and during the remainder of the month were taken in fair quantities; none being reported afterwards until 20th July, when they were reported to have struck in at Eagle Head. From 6th to 11th June, good catches were made daily, but afterwards, with the exception of a few light hauls in former part of September, none were reported.

Liverpool.—A few herring appeared about 24th May, when a small catch was made; none being afterwards reported until 13th June, when they began to strike in, and light and irregular catches were made until the 28th. The following day 30 barrels were reported in nets, and on the 30th, 150 barrels were reported to have been taken in traps. On 20th July, herring were reported schooling outside, but no catches were made until the 29th, when some boats were reported with one barrel. During the first two weeks of August the catch, although irregular, was on an average good. None reported afterwards.

Lockeport.—Herring first reported 12th May, when light catches were made on that day and on 31st. From 19th June, to 18th July, light takes were reported daily. Dogfish became very numerous about 30th June, and rendered it impossible to set nets or traps. About 1st August, they struck in considerable quantities, and fishing was good for about 10 days, when dogfish again became numerous, and getting inside the schools of herring drove them off into deep water. Throughout September, the fishery was very poor and irregular. About the middle of October, net fishermen again made fair hauls furnishing sufficient bait for inshore fishermen. It is reported that one man at Green Harbour with a set seine, in the early part of

June, made a haul of about 300 barrels, which were sold fresh for bait to bankers; thus supplying a much needed want, as at that time no herring were obtainable with nets. The total catch for the season is estimated about 2,100 barrels; total catch for small boats 1,800 barrels and seine 300 barrels. The number of boats engaged in this fishery is about 100, with an average of 6 nets to each boat besides one seine. Number of men employed about 250.

Sand Point.—About 24th May herring were reported offshore in large quantities, but few were taken inshore, although fairly plentiful, owing to fishermen's nets being of too large a mesh. On 30th June they struck in plentifully and were reported of large size, but few catches were reported, except on the 29th, when some boats had two barrels per net of large fish. Throughout August and former half of September the catch was exceptionally good, boats having from one to four barrels during first week, fish being large and of excellent quality. The total season was considered good; there having been about 5,000 barrels salted and packed for market, besides about 800 barrels sold fresh for bait.

Port Latour.—The first report of herring received was on 19th June, from which date, with the exception of some good catches during latter part of August and first part of September the catches were poor throughout the whole season; the total catch being estimated about 75 per cent of last season's catch, or about 3,000 barrels. It is reported that the large falling off in the fishery is greatly owing to the nets being left continually in the water for weeks at a time; thus driving the fish from their old feeding and spawning grounds.

Pubnico.—The herring fishery, as in the previous year has been a total failure.

Yarmouth.—Herring struck in 15th May, from which time until the end of June light catches were reported daily. About 14th September, herring were reported in abundance at Mud Island.

Digby.—Herring first appeared about 19th May, but as far as reported, the catches were light and irregular. Total quantity exported during past season is estimated about 551 barrels.

COD FISH.

Anticosti.

English Bay.—First appearance reported 1st June, during which month the average catch was good. On the 24th, boats on the western part of the island were reported with an average of 5 drafts (238 pounds) and fishermen had as much as they could cure. Throughout July and August the catches, although somewhat irregular, were on an average fair; none being afterwards reported until October, during the first two weeks of which month some excellent catches were reported. Total catch of 28 boats for season estimated at 1,114 drafts (238 pounds).

Fox Bay.—Fair catches of cod were made from 31st May, until about the 23rd of June, when strong easterly winds drove all fish away from that end of the Island. No catches reported afterwards. Total catch of 5 boats estimated about 175 drafts (238 pounds).

South-west Point.—First appearance about 23rd June, when they appeared in large quantities, but the catches, although good until about the 23rd of August, were very irregular, owing to stormy weather, and the great scarcity of bait which seemed to be the main obstacle. On the whole, the past season has been a good one. Owing to their being no telegraphic communication at stations on the northern part of the island, no reports of the state of the fishery in those localities were received.

Quebec.

Seven Islands.—Appeared first about 26th May, from which date until 4th June catches were light. During the remainder of the month and up to 14th July, the catches were good; but irregular catches were made until about 15th September.

St. John's River.—Fishing commenced on June 10th, and from that date until 10th July the catches were good each day. Estimated total catch about 1,000 quintals.

Long Point.—From 10th June until the 26th good catches were reported daily, and for the following week some excellent catches were made. From 3rd July to 10th the catch was fair, but stormy weather prevented fishing for about a week, after which some good catches were made and were reported fairly plentiful between Sheldrake and Esquimaux Point. Throughout August the catches were fair but irregular. From 5th to 10th September, fair fishing was reported between Thunder River and Esquimaux Point, and on the following days was very good at Esquimaux Point and the catches fair at Long Point until the 15th, when fishing was prevented by stormy weather. From 2nd to 12th October the catches were good at Long Point. From Esquimaux Point to Sheldrake fair fishing was reported on the 9th, but good from Sheldrake to Thunder River on the 12th. Total catch estimated at about 1,660 quintals.

Moisie and Ste. Marguerite.—From 28th July to 12th September the catches were fair, although very irregular.

Sheldrake.—The catches throughout June were on an average good, there being some excellent catches made during latter half of month. From 1st July to third week of October the catches, although fairly good, were very irregular.

Thunder River.—Good fishing was reported during second week of June, and fair last week. From 1st to 18th July fair catches were made daily, and during remainder of the month the catches were usually better. Total catch estimated about 5,500 quintals.

Gaspé.—The catch of cod for the whole season is considered somewhat below the average of former years.

Point St. Peter.—First report on cod on 17th May indicated an average of $\frac{1}{2}$ per boat; from which time until about the 11th of August the average catch was fair, although an excellent catch of 500 drafts was reported during the last week of July. From 11th of August to end of season, although cod was reported plentiful, scarcity of bait and bad weather prevented fishing. It is reported that the past season's operations have been good, and of the 125 boats engaged in this fishery the average catch is estimated at 130 drafts.

Percé.—First catch of cod reported on 20th May, and remained fairly plentiful until 16th June, when fishing was suspended owing to stormy weather. About the 25th, reports indicated fish plentiful, but owing to great scarcity of bait the catch was only fair. On 5th July, bait became plentiful, but the high tides and rough seas made it impossible for fishermen to make more than a fair average catch, which lasted until the close of the season, although bait again became scarce after 21st August.

Grand River.—Codfish appeared 1st May, but no catches were reported until latter part of the month, when light catches were made daily. During the first ten days of June, the catches varied from fair to good, but afterwards became poor, owing to scarcity of bait. The catches throughout July averaged fair, although they were reported plentiful on the banks about the 15th, bankers returning about second week of August loaded. High tides and stormy weather prevented inshore fishing throughout August, although some few catches were made during that month, and also in September. On the 15th of the latter month, boats again returned from banks with good fares, few being afterwards taken inshore, latter part of September, October, and first few days of November.

Newport Point.—Fishing commenced on 23rd May, and catches averaged fair during the remainder of the month, although on the 26th good fishing was reported on Orphan and Bradelle banks. On 25th June, cod were reported plentiful inshore and on the banks, but the catches were only fair owing to scarcity of bait, although a very few catches were made inshore. The average catch throughout July and first ten days of August was fair, after which the weather became bad, and but few catches were taken during the remainder of month. From 5th to 15th of August cod and bait were very good on the banks, and notwithstanding the unfavourable

weather, some boats had from twenty to twenty-five drafts. During first ten days of September, the fishing was poor, but afterwards became fair inshore, while boats from banks returned with an average of eighteen drafts. Throughout October and first few days of November, when weather permitted, fair catches were reported daily. Estimated total catch for season, about 8,000 drafts.

Paspebiac.—Codfish appeared on 19th May, and for about four days very good catches were reported, throughout June and July the catch was fair; but afterwards became poor, owing to scarcity of bait and stormy weather, continuing so until about the middle of September, from which date until the end of October the catch was fair. During first half of November the catches varied from fair to good.

New Brunswick.

Caraquet.—First report received 29th May from this station indicated cod fishing very good on Miscou banks, where boats averaged 15 quintals—some being as high as 30 quintals. The inshore catches from 1st to 12th of June were poor, owing to scarcity of bait; but during the remainder of the month varied from fair to good, during first week of July the catches again became poor, owing to bait being scarce, and none were reported afterwards until first week of August, when good catches were obtained, boats varying from 15 to 25 quintals. The total catch to date is estimated about 10 per cent better than last season. Throughout latter part of season, fishing, owing to rough weather, was a partial failure; being considered about 20 per cent less than last fall. It is reported that during a gale of August 22nd, boats became so damaged that a number of them had to be hauled up for repairs and consequently lost about two weeks fishing.

Shippegan.—Fishing commenced about 12th May, but no catches worthy of note were made until the beginning of June, which proved an exceptionally successful month; boats and schooners obtaining full fares and the catch reported as being the largest for years. During the first week of July, although not as good as the previous month, boats obtained good fares; after which the catch, although irregular, was poor until end of month; the catch to date being reported in excess of last year. Throughout August and September the catches were very light and irregular, but during the first two weeks of October some excellent catches were made by shore boats. On the whole, the season's catch is somewhat below the average: *i. e.*, when a fair season's work has been done, boats average 150 quintals and schooners 200 quintals. This season the boats only averaged from 110 quintals to 120 quintals, and schooners averaged 175 quintals. This fishery is very largely prosecuted in this district, there being about 110 boats and schooners engaged; the fish being cured and mostly shipped to Mediterranean and West India Ports.

Escuminac.—The catch of cod for the whole season is considered fair; there having been some excellent catches made during the third week of June and second week of July.

Campobello.—First despatch received 28th May, indicated fair fishing; but trawl fishing in the channel not up to the average. During the first two weeks of June fishing slightly improved, but afterwards became poor, and remained so until the end of the month. No catches were afterwards reported, excepting for the first two weeks of September, when light catches were made daily.

Beaver Harbour.—Codfish appeared about 23rd May, from which date until the end of September the catch was light.

Grand Manan.—First catch reported 7th May, during which month the average was fair. On 31st May, they were reported plentiful at Dark Harbour, and on the day following plentiful at Grand Manan. Throughout June the average catch was good: some very good fishing also being done on Grand Manan bank on the 17th and at Money Cove on the 24th, when boats averaged 5 quintals. The inshore fishery was only fair throughout July, but bankers arrived about the latter end of month with good fares from Grand Manan and Ingall's banks. From 7th to 10th of August cod was plentiful on shore soundings, and good catches were reported. On the 12th, good fishing was obtained on gravelly ground, and on the succeeding four days some

excellent catches were made at Bradford's Cove, Clark's Rock, Southern Head and on shore soundings. After this, when weater permitted, the average catch was fair at Flagg's Cove and Bradford's Cove. During September fishing was as follows:—Fair on the second at Bradford's Cove, which slightly increased during the following three days; very good at Southern Head soundings and Bradford's Cove on the 6th and 7th, and on the 8th, boats averaged 6 quintals. On the 11th fair fishing was done on soundings and Three Islands, and on the 12th and 13th good catches were reported at Bulk Head, Southern Head, and on soundings; increasing on the following day to very good at Southern Head and Bradford's Cove, after which stormy weather prevented fishing. From 18th to 27th, some good catches were made at Bradford's Cove, Southern Head, Three Islands, Duck Island, Bulk Head, Rand's Rock and on shore soundings, although from 24th to 26th inclusive excellent fishing was done at Bulk Head. When weather permitted during October, fair fishing was reported at North Head, Rand's Rock and Two and Three Islands. Taking into consideration the number of men engaged in the fishing business in this district, which are estimated at about 400, the total catch, comprising 5,000 quintals dry cod and 200 tons of fresh cod, may be considered good.

Prince Edward Island.

Miminegash.—This fishery is not prosecuted to any great extent on this part of the coast. The total catch for the season was as usual very poor.

Alberton.—Here also the catch was poor for reasons above stated, although some boats did fairly well.

Malpeque.—Fishing commenced about 23rd May, and was an average catch.

Georgetown.—Cod fishing commenced about 25th May, but the catches proved very poor; being the smallest for some years past. Dogfish were very abundant, much more so than usual, and proved troublesome and destructive. Reports obtained from bank fishermen, indicated that owing to the prevalence of bad weather the catch of cod was not so good as it otherwise would have been.

Magdalen Islands.

Owing to the cable being interrupted during the greater part of the season, daily reports were not forthcoming. About the 22nd of May, cod appeared very plentiful, but owing to rough weather no catches were made. From about 6th June, to end of July the catches were poor, but for remainder of season were a fair average. Reports from Bryon Island and northern side of Magdalen's indicated good fishing throughout the season.

Cape Breton.

Port Hood.—First appearance about 18th May, during which month the catches were good. Throughout June the catch was rather light; but during July was a fair average. From 1st of August to end of season, when bait was obtainable and weather fine, the catches were fairly good.

Mabou.—A few light catches were made about 30th May, but from the 26th of that month until 13th June, good catches were reported daily; after that bait became scarce, and up to the 11th of August the catches only averaged fair. During the remainder of month little attention was given to this fishery, as fishermen were employed on government work at entrance to harbour. Throughout September, little or nothing was done from Mabou northward twenty miles, owing to high winds and rough weather. In October, cod were very plentiful, but on account of rough weather very few fish were caught. Dogfish were reported more plentiful on the coast this year, than for many years past, and their presence had, no doubt, much to do with the limited quantity of cod taken.

Margaree.—Cod were reported rather plentiful on the coast for the greater part of the season, but owing to the abundance of dogfish, scarcity of bait, and the

small class of boats engaged in the fishery, the catches were only on an average fair. Fishermen report the fish keeping much further out from the shore than formerly.

Cheticamp.—Fishing commenced on 19th May, the average catch up to 7th July, having been fair; but for the remainder of the month poor. From 6th to 15th August, fair catches were made daily; after which date, owing to easterly gales, strong tides and scarcity of bait, but few were taken until October 6th, when fair catches were made for about 10 days when weather permitted. From the 16th to end of month light catches were reported daily.

Meat Cove.—Throughout June and first part of July, there was a good run of fish, and the average catch was fairly good. From that date very little was done until end of season, when weather permitted, and bait was obtainable. It is reported the past season's catch has been somewhat better than the previous years.

Ingonish.—From 15th May until end of July, although cod were fairly good, the catches were rather poor owing to scarcity of bait. During the first two weeks and last week of August fair catches were reported; although boats were greatly damaged and disabled by the severe storm of the 22nd. On 2nd September fish were reported plentiful, but owing to the heavy gales and strong tides, the catches throughout the month were only fair, although some excellent catches were made from the 11th to 15th inclusive. October proved better than the average for some years past, but as usual in this month the weather was very broken; but boats averaged fair when fishing was practicable.

St. Ann's.—Cod appeared about 12th May, and were taken in small quantities pretty regularly until end of August.

North Sydney.—Cod fishing poor all season.

Louisburg.—Fishing commenced about 9th May, but from that date until end of July the catches were very light. During August and September the coast swarmed with dogfish and bait was very scarce, the fishery thus being greatly hindered. It is estimated that not over \$200 worth were taken from 1st of August to 8th of September. In latter part of September, boats which were able to go off shore from 6 to 10 miles averaged two quintals. The weather throughout October was very stormy and but few light catches were made.

Gabarus.—Codfish appeared about 22nd May, and were taken in fair quantities until end of June; after which time the fishery was poor, owing to scarcity of bait, until the end of August. Throughout September and October, bad weather prevented fishing, although some good catches were made during second and third weeks of September. Total catch estimated 25 per cent less than last season.

L'Ardoise.—First catch of cod on 2nd June, during which month the average was fair. In July, fishing became poor, but slightly improved during first half of August, latter half being pretty stormy for fishing. Fair catches were made pretty regularly through September and October, although stormy weather somewhat hindered fishing in September. It is estimated that the total catch is in excess of last year's.

St. Peter's.—The cod fishery in this district has been, on an average, poor; but vessel fishermen from this place and vicinity, report having done as well, if not better, than last year. In Bras d'Or Lake, small catches were made from the 25th of April, all through the season. On 4th July, fair fishing was reported on Eastern banks, and on 4th August, vessels were doing better than last season on an average. On the 29th cod fishing was fair and bait plentiful, on Eastern banks, and about 16th September, fair fishing was reported when weather permitted.

Arichat.—The cod fishery from 9th May to 21st August, was on an average good; but after that date it was poor. The rough weather which set in after 21st August, coupled with the want of boats sufficiently large, and the absence of proper appliances for procuring bait, accounts in some degree for the fact the catch has not been larger.

West Arichat.—Cod fishing commenced about 23rd May, and although the catches were light throughout the season, they will compare favourably with those of

late years. The greater part of the fish this year were taken with hand lines; very few having been taken on trawls. It is reported among the best fishermen the quantity taken per boat was from 20 quintals to 45 quintals.

Petite de Grat.—From the 20th of May until the 9th of August, the catch varied from fair to poor; but during remainder of August was prevented by rough weather and scarcity of bait. Throughout September and October, fair catches were made when weather permitted.

D'Escousse.—Average catch fair from 30th May to 13th July. Of the fourteen vessels engaged in the North Bay fishery, the total catch this year was estimated at about 9,000 quintals. The vessels engaged in the deep-sea fishery have been very successful for the past several years, and each year one or two vessels are added to the fleet.

Nova Scotia.

Bayfield.—Codfish appeared about 20th May, but the catches were poor throughout the whole season.

Canso.—Cod first appeared in Chedabucto Bay 8th May, and light catches were made until the 22nd, from which date until the end of the season they varied from fair to good.

Whitehead.—Fishing commenced about 18th May, but were not reported until June, when light catches were made daily, between the 19th and 26th. During former half of July light catches were made regularly, but dogfish appeared and became very troublesome; after which the catches were very irregular until 4th August, from which date but few were taken. Total catch estimated about 1,500 quintals.

Isaac's Harbour.—A fair catch was made in the last week of May for the first time, but throughout the whole season they were very irregular, and at best only fair. During the month of October, good fishing was reported in deep water, but owing to unfavourable weather, fishermen were only able to get on the grounds two or three days during the week.

Spry Bay.—Some fair but irregular catches were made in the latter part of May and throughout June, and also in the latter part of October.

Salmon River.—The total catch is estimated about 10 per cent in excess of 1892.

Musquodoboit Harbour.—From 19th May until end of June, the catches varied from fair to good, but for the remainder of the season were fair when weather permitted.

Lunenburg.—On 5th May, good fishing was reported on shore soundings, but no catches were made until about the 29th, when good takes were reported for the succeeding three days. From 1st June to 15th the catches were fair, but were reported scarce on Western and Quero banks. During latter part of June, some excellent catches were reported, and for the remainder of the season the catch was fair. On 11th September, cod and bait were reported plentiful on Quero bank, but bad weather interfered with fishing, and fishermen returned about the 27th with an average catch. The total catch of the sixty Lunenburg bankers is estimated at 79,005 quintals, and of the six comprising the Labrador fleet, 3,850 quintals. It is reported that the total catch has not been so good as last year, owing to the prevalence of dogfish on the coast the past season.

Port Medway.—Although this fishery is not generally prosecuted, fair catches were reported from 4th May to end of June. Few light catches were also reported during the former parts of July, August, September, and October.

Liverpool.—Fishing commenced about 23rd May, and fair catches were made pretty regularly until end of June, when bait became very scarce, and as a result the catches were poor. About 27th July, cod fishing was reported good offshore, but scarcity of bait prevented any catches being made. From 1st to 11th August, fair fishing was reported, but about the 17th dogfish struck in and no catches were afterwards made.

Lockeport.—Codfish appeared 2nd May, from which date until the end of June the catches were good; the fishing having been much better than last spring, and fish were of much better quality. About 27th May, very good fishing was reported on offshore grounds and small bankers did well. About the last of June, dogfish were reported swarming on the coast, and until the 28th of July the catches of cod were very light. On the latter date, however, herring struck in, and hauls averaging two barrels per net being made, cod fishing became excellent; averaging about two quintals per man. About the same time vessels from outside grounds arrived with an average of 22 quintals; throughout August and September, the average catch was fair. During latter half of September, vessels on offshore grounds averaged 15 quintals. On the whole the past season's work has been fairly good as the following results will show:—

	Quintals.
Total catch for bankers for season.....	12,500
“ “ small crafts “	4,600
“ “ boats	4,400
Grand total.....	21,000
<hr/>	
Total number of vessels 75 to 100 tons. reg. engaged—banking 10 with 180 hands.	
“ “ 10 40 “ shore banking 15 with 135 hands.	
“ “ “ inshore fishing 80 with 240 hands.	

Sand Point.—Good fishing was reported in offshore grounds during the first week of May and continued good the whole month. About 29th May, bankers reported good fishing 18 miles south-east of Shelburne light. Throughout June and July the catches were fair; good takes having been reported on Roseway and La Have banks on the 6th of June. Good fishing was also reported on Roseway bank on 7th, 19th and 25th of July. During the month of August, and first half of September, bankers on offshore grounds, La Have and Roseway banks did well, while the catches inshore were very light in August but slightly increased during September. During the latter part of October and former part of November light catches were reported each day; fishing on shore soundings and La Have bank being fair on 4th November. On the whole, the total catch per inshore boat has been poor, not having exceeded one third of previous year's catches. It is reported that there were no schools of codfish in shore the past season; consequently the fish ran very small in size and scattering. Notwithstanding the fact that bait was very scarce throughout May and June, the small crafts and shallops with hand lines and trawls on outer grounds, have been more successful than for the past three years; and eastern bankers with hand lines also secured good fares.

Port Latour.—From 9th May, until end of June the catches were fair; but for the remainder of the season poor. It is estimated that the total quantity taken will be about 50 per cent less than last season; very few being of large size.

Pubnico.—Cod fishing commenced about 15th May, but were reported scarce throughout the whole season, with the exception of the month of June, when fair catches were made daily. Total catch estimated below the average.

Yarmouth.—From 5th May to 1st June the cod fishery was fair; but afterwards became good and remained so until the 14th, from which date until end of month the catch was fair. During the remainder of the season the fishery was poor, owing chiefly to scarcity of bait, and prevalence of dogfish; although fishing was reported on Trinity Shoals on 14th September and at Yarmouth during the 3rd week, when weather permitted.

Freeport.—On 22nd May fishing was reported very good on banks, but poor inshore, although a good catch was made on the 29th. No reports of catches were received after until 21st July, when light catches were made daily for about a week. From 25th to end of month a fine run of fish appeared on the grounds, but owing to scarcity of bait the catches were light. During the first week of August fair catches were made daily, and about the latter week of that month and first ten days of September fishing and bait again became fair, but stormy weather prevented fishing.

From 11th to 18th September, good catches were made daily. None afterwards. The total catch is estimated about 7,000 quintals and is considered about 1,000 quintals better than in 1892.

Digby.—First appearance on 3rd May; catches varying from fair to good until about 25th July, when they became poor and irregular until end of August. During the first half of September the catches again varied from fair to good, but after that the fishery was poor.

MACKEREL.

Quebec.

Gaspé.—The first appearance of mackerel was noted on 10th July, but the catches were poor and irregular.

Point St. Peter.—Very few mackerel were taken.

Fort Point.—Mackerel appeared on 30th June, but the catch, as far as reported has been a total failure.

New Brunswick.

Caraguet.—On 26th July, mackerel were reported striking in Chaleurs Bay, but no catches were made until about 8th July, when they became plentiful, and Prince Edward Island schooners made fair hauls by nets during the succeeding ten days.

Shippegan.—Mackerel appeared 13th June, which was much earlier than last year, and light catches of large fish were made quite regularly until about 31st July, after which date and until the end of the month, the catches were good: fish varying from 16 to 20 inches, and boats averaging about 90 mackerel. During the second week of August, although fish was reported plentiful, the catch was poor, owing to the fish not taking the hook; the total catch to date is estimated as being below the average. From 12th September to 18th, fishing was very good and fish of large size. The total quantity taken is estimated about 1,000 barrels, most of which were salted and exported.

Escuminac.—From 29th June to 10th July, a few light catches were made each day; about the latter date they began to appear in larger quantities, and one schooner was reported to have taken about 40 barrels by drift nets, but none were taken by hooks. From the 12th July to the end of month the catches varied only from fair to good; notwithstanding the fact that they were plentiful. In size, they ran from 14 to 17 inches in length. Throughout August the average catch was fair, and the fish were put in freezers for further shipment.

Campobello.—A very fair catch of mackerel was made on 27th May, but very few afterwards reported.

Grand Manan.—The mackerel fishery, for the past season, has been almost a complete failure, there having been but about 20 barrels taken. Mackerel were reported schooling at the following places, but no catches were reported,—Seal Island, 26th and 27th June; Gannet Rock, 3rd July; ten miles off Swallow Tail, 19th of July; ten miles off Flagg's Cove, 9th August, and five miles off White Head, from 23rd to 26th August.

Magdalen Islands.

Mackerel appeared first about 6th June, but although seemingly plentiful few had been taken previous to 24th July, when hooking was reported very good on north side of island, and boats of two men each had from 250 to 1,000 per day. On 31st July, mackerel were reported more plentiful than for the past twenty years, and very good catches were made of fish of large size, but not very fat. Throughout August and September, when weather permitted, excellent hauls were reported, and they were also reported taking hooks freely at North Cape, on the 7th of August.

The Bryon Island mackerel fishery has been very good during the past season. On the whole the past season's work has been good on the north-eastern part of the island, but very poor on the northern part.

Prince Edward Island.

Roseville and Miminegash.—Fishing commenced about 13th June, the catches being light until about the 27th, when mackerel were reported taking hooks freely, and from which date until the 17th of July, the catches were fair. During remainder of season the catches were light. Reports indicate that the season's catch has been a comparative failure, the season's catch not being over half of last season's. This failure is attributed to the stormy weather, as fish were reported plentiful throughout the season.

Alberton.—On 6th June, mackerel were reported schooling, but no catches were made until the 16th, when fair hauls were made on northern and western sides of island. On the 19th, fair netting was reported from Waterford to Tignish, and were schooling off North Cape. After this date the catches became poor, but fish were reported schooling on Bradley bank on the 28th, and at Frog Pond, Tignish and Alberton on the 3rd and 4th of June, when fair fishing was done, especially on the 15th and 16th, when local schooners made fine hauls, and Alberton and Tignish boats averaged 1,500. From the 19th to 23rd, they were schooling at all stations in this district, but the takes were poor during remainder of month, owing to rough weather. On 2nd August, good fishing was reported from North Cape to Kildare, and averaged 800. On the 12th, fishing slightly improved, and although fair catches were made during the last week, yet the stormy weather greatly hindered fishing, and boats having been badly damaged on the 23rd. Throughout September the weather was very stormy, although mackerel were schooling at Alberton on the 7th, and at Tignish on the 25th, no takes were reported, as they were supposed to be only tinkers. On the whole, the season's catch has been light.

Malpeque.—Fishing commenced about 9th June, and light hauls were made pretty regularly until the end of the month, when the catches slightly increased until about the 10th of August, and boats averaged 500. During the remainder of the season light catches were made when weather permitted. It is estimated that the total catch has been about 600 barrels; 500 barrels having been shipped to the United States, and the balance reserved for local consumption.

Georgetown.—Mackerel appeared about 7th July, the catches having been a fair average during that month. Throughout August the catches were rather poor, although they were reported plentiful and of good quality on the 19th. On 4th September the schooner "Orion" arrived with 103 barrels, but reported the weather too stormy for fishing. During the second week of September, when boats could get out, fishermen reported mackerel plentiful, but would not take hook. They were also reported schooling at Panmure Island on 10th July, and 29th August, and taking hook freely at Cardigan Bay on 10th July. On the whole the fishery proved very irregular and unsatisfactory, the gale of 21st August having practically closed the boat fishery; many of the fishermen having lost their boats. The total catch is estimated at about 500 barrels, and compared favourably with last season.

Cape Breton.

Port Hood.—The catch of mackerel, as far as reported, was light; there having been only a few barrels taken in nets and scarcely any with hooks. Those caught, however, were large and of good quality.

Mabou.—The season's catch was reported less than that of last year, and nearly all the fish were used for bait.

Margaree.—First appearance noted 15th June, but very few were taken during the season, although good fishing was reported at Friar's Head from 8th to 12th August, when boats averaged 800 large fish. Average catch per boat for season estimated at five barrels.

Meat Cove.—Mackerel appeared about 13th June, but notwithstanding the fact that they were plentiful, and reported taking hooks freely at Pleasant Bay, on 2nd and 3rd August, and Cape North on the 9th, the total catch is below the average.

Ingonish.—The catches of spring mackerel, of which the first was reported on 29th May, although irregular was somewhat better than last year; schools having been reported in the bay on 5th June, and good catches made, the highest being 800. During remainder of the season the catch was light.

St. Ann's.—First appearance in second week of June, but very few were taken during the season.

North Sydney.—Large schools of mackerel were reported off the harbour in August and September, but no takes were reported by boat.

Louisburg.—First appearance noted 27th May, fair catches having been made by nets during the spring and fall. The estimated catch per boat in June was ten barrels, while the catch for fall fish, which were large and fat, averaged five barrels. Good fishing was reported off Scatari 7th November.

Gabarus.—Mackerel appeared about 29th May but continued very scarce throughout the whole season, the fish having passed outside in deep water. Total catch estimated at about half of last season's catch.

L'Ardoise.—The catches of mackerel, as far as reported, were light; the total catch being estimated much below that of last year.

St. Peter's.—First appearance about 29th May, but only a mere sprinkling was taken during the season, until about 8th November, when a run of large No. 1 mackerel struck inshore from Three Island Cove extending to Point Micheau and during that week large quantities were taken daily. In the second week of July the movements of this fish were reported different from heretofore.

Arichat.—First appearance 30th May. The spring catch was reported a total failure, and as the fall catches were not general the average has been only fair.

West Arichat.—The mackerel fishery here has been a total failure.

D'Escousse.—Here also the fishery has been a failure; owing principally to the limited number of boats engaged, and which are reported to be decreasing each year, as outside fishing in vessels is found to be more profitable.

Petite de Grat.—First appearance noted 29th May, from which date until the end of June light catches were made daily; nothing having been done afterwards until the latter part of October, when some very good fishing was reported until about the middle of November. On the whole the past season's catch has been fairly good, the total catch being estimated at about 300 barrels, about the same as last year.

Nova Scotia.

Bayfield.—Mackerel struck in 19th May, from which date until end of September the catches were light; excepting from 5th to 15th of August, when large quantities were taken daily with hooks. Estimated total catch for season below the average.

Port Mulgrave.—During the past season, 153 barrels of salted mackerel and 278,330 pounds of fresh mackerel in barrels and boxes have been shipped from this station to the United States.

Canso.—Struck in 31st May, and light catches were made pretty regularly throughout the season. On 17th October boats did well in Chedabucto Bay, there having been a total catch of 432 barrels. *Petite de Grat* boats also did well here, having obtained a total catch of 10,800 mackerel. On the 23rd, good fishing was reported at the head of bay, and large hauls made. During the first half of November boats varied from 150 to 200 each.

Whitehead.—Very few reported; total catch will not exceed 75 barrels.

Isaac's Harbour.—Mackerel were reported schooling 29th May, but the catches were light. The fish were very large size.

Salmon River.—The mackerel fishery here has been a total failure.

Musquodoboit Harbour.—Mackerel appeared about 8th June, and during the second and third weeks of that month, last week of July and 1st week of September,

light catches were reported daily. Total catch for the season, in this district, is estimated about 492 barrels.

Halifax.—From an unofficial source, the following information has been obtained in regard to mackerel fishery in this vicinity. Mackerel were reported schooling off the coast 29th September, and from 700 barrels to 800 barrels were taken in the coves along the shore and sold to dealers for shipment to Boston. These catches were sent fresh, packed in ice, something over 100 fish to a barrel, so that nearly 80,000 fish have been taken. The price obtained by the fishermen varied from 45 to 50 cents per dozen. About 10th November, they were again reported plentiful off the harbour, but no catches were reported.

Lunenburg.—First appearance reported 24th May, from which date until the 16th June, the catches were light. On the 17th, 60 barrels were taken in traps, and from the 20th to end of month, some excellent fishing was done; there having been about 400 barrels taken; 50 barrels of which were sold for bait, 10 barrels shipped fresh to Halifax, and the balance salted. During the remainder of the season, light catches were made rather irregularly; fish being reported large but of poor quality.

Port Medway.—Very few mackerel taken during the season.

Liverpool.—On June 15th, large schools of mackerel were reported ten miles offshore, and on the 20th, were schooling three miles off. On the 21st, 24th and 26th, the catches amounted to 15 and 40 barrels respectively. About 4th July, large schools were reported between Cape Sable and Liverpool, but no takes were reported until the 29th, when a catch of 6 barrels was made. On 10th August, 120 barrels of large fish were taken in nets, and on the 12th, about 60 barrels were taken. Nothing was afterwards reported until about November 14th, when boats were reported to vary from 1 to 10 barrels each.

Lockeport.—Very few reported; total catch not exceeding 125 barrels.

Sand Point.—Fishery very poor, total catch will not be over ten barrels.

Port Latour.—The mackerel fishery in this district has been almost a total failure, owing to the same cause assigned in regard to herring. The total catch, exclusive of fish used for bait and home consumption, has not been over 50 barrels.

Pubnico.—Mackerel appears about 22nd May, and during the following two weeks some excellent catches were made; traps at St. John's Island and Bluff Head averaging 50 barrels. For the week ending 3rd June, 1,200 barrels were reported to have been shipped in ice to Boston, besides twenty barrels sold for bait. During the remainder of the month the catches were light, although on the 19th, traps at Pubnico Point and Bluff Head averaged 15 barrels. About 20th July, they were reported schooling in Pubnico Harbour, but the catches were light and nothing was reported afterwards.

Yarmouth.—About 1 dozen appeared in traps on May 15th and 16th, and large schools were reported to have passed on 22nd. From 29th May, to 26th June the average catch was fair, but during the remainder of the season were very scarce and exceedingly small.

Digby.—Reported schooling at Digby 31st May, and during the following month light hauls were made pretty regularly. On 26th June, they were reported schooling between Point Prim and the Wolves, but no catches were reported. During the first two weeks of July light hauls were made at Digby, and from the 19th to 21st, fair catches of very large fish were reported in St. Mary's Bay. On 1st August, the catch of 10 barrels was reported taken in sea-wall traps (in St. Mary's Bay) and on the 24th reports from the lower part of the county announced that mackerel had struck in along the Meteghan shore; the fish being No. 1 and 2 which were somewhat earlier than last season.

I have the honour to be sir,

Your obedient servant,

W. M. HUTCHINS,

Officer in charge Fisheries Intelligence Bureau.

APPENDIX No. 5.

NOVA SCOTIA.

District No. 1, comprising the four counties of the Island of Cape Breton.—Inspector A. C. Bertram, North Sydney, C. B.

District No. 2, comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysboro', Halifax and Hants.—Inspector Robert Hockin, Pictou.

District No. 3, comprising the counties of Kings, Annapolis, Digby, Yarmouth, Shelburne, Queen's and Lunenburg.—Inspector J. R. Kinney, Yarmouth.

DISTRICT No. 1.

ANNUAL REPORT OF THE FISHERIES OF CAPE BRETON ISLAND, INCLUDING THE COUNTIES OF CAPE BRETON, INVERNESS, RICHMOND AND VICTORIA FOR THE YEAR 1893, BY INSPECTOR A. C. BERTRAM.

NORTH SYDNEY, C.B., 30th December, 1893.

Hon. Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries, Ottawa.

SIR,—I have the honour to submit herewith my annual report and statistics for the year 1893 of the fisheries in district No. 1, comprising the Island of Cape Breton and its coastal waters.

The total product for 1893 amounts to \$1,072,414.89, showing an increase over 1892 of \$25,372.54. This increase is divided among three counties, viz., Cape Breton, Inverness and Richmond; the county of Victoria showing a decrease of \$5,858.50. This is more clearly shown by the following abstract:—

Counties.	1892.	1893.	Increase.	Decrease.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Cape Breton.	178,958 16	182,705 21	3,747 05	
Inverness.	338,945 80	357,753 83	18,808 03	
Richmond.	360,953 93	369,629 89	8,675 96	
Victoria.	168,184 46	162,325 96		5,858 50
Totals.	1,047,042 35	1,072,414 89	31,231 04	5,858 50
Increase.			25,372 54	

The increase shown above is made up by the lobster fishery, which has been exceptionally good in the three counties referred to.

Had it not been for this branch of the fishing industry there would have been a decrease in the total value of the fisheries for 1893 in this district, owing largely to the failure in the herring fishery, which shows a falling off of 4,105 barrels. I find also that the number of men engaged in the fisheries during 1893 was 6,924, showing a decrease over last year of 944, the decrease being in the counties of Victoria,

Richmond and Inverness. The county of Victoria, in which a coal mine was reopened this year, shows the greatest decrease in the number employed. While there is an increase of 7 vessels engaged in the fisheries over last year, there is a decrease of 61 in the number of boats. The decreases by counties in men and boats employed can be seen from the following table:—

Counties.	Men.		Vessels.		Boats.	
	1892.	1893.	1892.	1893.	1892.	1893.
Cape Breton.....	1,531	1,630	9	8	782	846
Inverness.....	2,091	1,936	10	12	813	785
Richmond.....	2,412	2,070	62	68	1,143	1,283
Victoria.....	1,883	1,288	2	2	1,032	795
	7,868	6,924	83	90	3,770	3,709

There is a disposition on the part of our fishermen to engage in other callings when opportunity offers. This is evidenced from the returns of Victoria county, where the New Campbellton coal mines which had been closed since 1875 were reopened this year, employing a number of those in that district who were last and previous years engaged in fishing.

In the same county the gypsum quarries, which showed increased development this year, employed a considerable number of men and as a result the fishing districts were drawn upon to supply the demand of increased labour. There is also a falling off in the number of fishermen in the county of Inverness where a coal mine and gypsum quarry were also opened up during the year.

Thus is the decrease in the number of fishermen accounted for in the two counties where the decreases are given in the returns. Shore fishermen complain that the fishing industry has not been profitable of late years and is growing more so from year to year. The years 1892 and 1893 were certainly not profitable ones for our shore fishermen, excepting those who were engaged this year up to the end of the season in the lobster fishery.

Had it not been for the success of this fishery I fear there would be destitution in some localities. The principal fishery of this island in former years was the cod fishery, but of late years these fish have not been found plentiful inshore until towards autumn. This was noticed particularly this season as fishermen did poorly until the month of October; "No fish" being the daily cry. Towards the end of the season the fish began to strike inshore and both boats and vessels made good hauls when the weather permitted. There is no doubt but the cod is a local fish and they live in colonies or families, each having a distinct *habitat* and that their migrations are limited in area, being merely from deep to shallow water, for spawning and feeding purposes, and each family keeps to its own locality. Fishermen tell us that there are localities in which larger and finer fish are invariably obtainable than in others.

It is even stated that an experienced fishermen can tell on close examination, where a specimen submitted to him has been taken. Various causes are assigned for the cod keeping in deep water during the summer months. One reason advanced is that fishing vessels from United States and Western Nova Scotia ports which engage in bank fishing keep the cod outside by the quantities of offal thrown overboard on the grounds.

Another reason is the presence during the past two years of immense schools of dog-fish on the coast. What baffles the most scientific inquiries is that for about 40 years previous to 1892 dog-fish were not known to visit our waters. Last year they made their appearance after such a long absence, and this year they were

found more plentiful and more destructive. When these fish were found on our coast 40 years ago they were quite valuable for the quantity of oil yielded, the price realized per gallon remunerating the fishermen for time and labour, but what can be obtained now therefor in our market does not pay the cost of production. The only use fishermen now make of these fish is to feed their swine. Some contend that there is medicinal virtue and nourishment in them for horses, if dried, pulverized and mixed with feed.

If these fish continue to swarm our coast, as they have for the past two years, the shore fisheries will suffer greatly. Dog-fish not only frighten away the other various kinds of fish from the shore waters but are very destructive to trawls and nets. They make their appearance on our coast in July and remain until October.

As already referred to there is an increase of 7 vessels in the number engaged in the fisheries this year. This increase, small though it be, is a pleasing sign of the times, as experience of late years must teach our fishermen that only vessel fishing will pay. The department has wisely encouraged this mode of fishing by increasing the bounty to vessels prosecuting the industry and by encouraging the building of a suitable class of fishing vessels. Every season the banks adjacent this island are covered with vessels from various parts of the Maritime Provinces and the United States. The men thus engaged do much better than boat fishermen, while the owners reap handsome profits for outlay. These vessels come to our shores from afar, and surely if their owners and those employed in them find this mode of fishing profitable it would be more so to our island fishermen as they live near the best fishing grounds in America and have advantages that outsiders cannot enjoy. While the returns represent the result of the year's fishery crop so far as our local fishermen are concerned, they do not show, by at least 60 per cent, the quantities of fish caught in the coastal waters of this island. The fishery statistics of Western Nova Scotia, St. Pierre, Miquelon and United States fishing districts would need to be consulted to give an idea of the yearly drain from the fishing grounds surrounding Cape Breton.

COD.

I find a falling off in this branch in the counties of Cape Breton, Inverness and Victoria and an increase in Richmond, leaving a total decrease for the whole district of 1,471 cwt. The aggregate value of the catch of cod for the year is \$444,919.50, a decrease compared with 1892 of \$2,358. Inverness County shows the largest decrease.

HERRING.

Herring are the first fish to visit our shores in the spring and upon this run, the cod and lobster fishermen largely depend for bait. These fish are much inferior to the mid-summer run, which command \$2.50 and \$3 per barrel more than either spring or fall herring and are used largely for home consumption by all classes. It is in these fish that the greatest decrease has taken place, being 4,105 barrels, each county contributing to the decrease. The cause for the absence of summer herring during the past two years cannot be accounted for. Herring are known to be sensitive to stormy weather and during storms make for deep water. Both this season and last just as they were making their appearance on the coast heavy east and north-east storms occurred lasting for several days. It may be that these storms caused the fish to return to deep water, thus resulting the failure the statistics for the past two seasons indicate.

The loss of this branch of the fishery is seriously felt by our people.

During the last days of December a medium sized run of herring, quite fat and nicely flavoured, was making its appearance in our coastal waters. Net fishermen were taking each day from one-half to a barrel per boat. What the extent of this fishery will be cannot be known until the publishing of next season's statistics, as the fish are likely to remain in our waters through the month of January.

MACKEREL.

This branch shows a total increase of 59 barrels over 1892. The county of Inverness shows an increase of 2,500 barrels and the county of Richmond a decrease of 2,774 barrels.

The returns for the counties of Cape Breton and Victoria give an increase of 255 and 22 barrels respectively.

In a special report to the department, I have dealt extensively with this branch of the fishery, giving the dates the various runs appear on our coast, the methods used in capturing and curing these fish in this district. The mackerel fishing industry is capable of much greater development by the fishermen of Cape Breton.

SALMON.

The statistics give a total increase in this branch of the fishery over 1892 of 27,336 pounds of fresh and 39 barrels pickled, besides 352 one-pound cans. The counties of Inverness, Richmond and Victoria contributed to the increase in the salmon fishery, Cape Breton county alone showing a decrease. In Inverness county is this fishery most extensively carried on, where the salmon are purchased fresh from the net fishermen and either placed in the freezers at Margaree Harbour and Port Mulgrave, or shipped in ice to Canadian and United States cities. There are two causes for the increased development in this branch of the fishery of late years. The first is the protection offered the various rivers by the department. The second, the increase in the number of fishermen engaged in prosecuting the salmon fishery.

Notwithstanding the increased drain of late years on the excellent salmon fishing grounds between Broad Cove and Eastern Harbour there is no sign of the waters becoming depleted, and salmon were found more plentiful the last season than in any previous year. The Margaree River is the principal spawning river for these fish. It is a well established law of fish-life that where the young come to life and spend their early days, thither they return when matured to spawn, and thus "repeat the story of their birth."

ALEWIVES.

There is an increase of 805 barrels in alewives over the previous year, the counties of Cape Breton, Inverness and Richmond contributing to make up the increase, while the county of Victoria shows a decrease of 86 barrels. This is principally a bait fish, as in the case of spring herring fishermen depend a good deal on alewives for their bait supply. They are used also for home consumption by the poorer classes of our people. Those fish require an easy and certain passage from tidal waters to the fresh water lakes and streams.

Cape Breton Island with its numerous rivers and lakes affords ample spawning grounds for alewives. The increase shows that the supply is keeping up.

SMELTS.

Although there was an increase in the number of licenses issued for bag-net fishing, I find a falling off in the catch of smelts for this year of 1,526 pounds over that of the previous year. The decrease has been the greatest in the county of Richmond, where the returns show a falling off of 14,656 pounds. Cape Breton county shows a decrease of 1,850 pounds, and the counties of Inverness and Victoria an increase each of 400 and 6,580 pounds respectively.

The cause of the decrease in the county of Richmond was owing to the scarcity of these fish in the tidal waters and estuaries of rivers.

The month of December continued mild throughout, which also had a militating effect on the fishery, as it can be more successfully prosecuted through ice than in open waters. Frost is necessary to freeze the fish for market. The smelt are taken from the nets, placed in small boxes and shipped by rail to the United States, New-York being the principal market. The price varies from 7 to 13c. per pound.

TROUT.

The past few years have not been favourable for this fishery in Cape Breton, owing to prevailing droughts during the months of July and August when the fish ascend to the upper waters of the rivers and streams. While the waters continue low and clear in the streams, trout will not enter the pools. I find, however, a total increase over 1892 of 1,884 pounds, made up by the increased catch of 3,774 pounds in the county of Victoria, where the streams were diligently whipped by Americans who visited Baddeck in summer and who are passionately fond of trout fishing, Cape Breton and Inverness counties both show a decrease. As these fish are used altogether for home consumption it is difficult to obtain accurate statistics of a season's catch. The officers who gather the statistics have to rely a good deal on their own judgment and that of others in the district for an estimation of the total catch each season.

LOBSTERS.

The returns from the four counties of this island show an increase in the lobster catch over the season of 1892 of 195,715 pounds. The largest increase is shown in the county of Richmond, being 85,214 over the previous year. This increase is owing to the lobsters being more plentiful on the coast than former years, notably at Gabarus and Fourchu districts, and also to the fifteen days' extension of the fishing season. In the district of Gabarus and Fourchu many fishermen would not have been able to purchase winter supplies for themselves and families had it not been for their earnings in this fishery. I watched the condition of the lobsters closely during the days of the extension and found that they were as free from berries and the meat as firm as at any time during the season.

The market price of lobsters has somewhat decreased but packers hope for an advance next season. While there were several new canning establishments operated for the first time the past season, there were as many old ones not in operation. There is not likely to be any increase in the number of factories canning next season.

OYSTERS.

The principal oyster beds of this island are in the counties of Inverness and Victoria. Although there are also a number of beds in the counties of Cape Breton and Richmond, the most fishing is done in first named counties.

The returns from Victoria county show the largest increase, but it should really be credited to Inverness, as the fishermen of the former county secure the greater number of oysters taken by them from the beds of the Inverness district.

Altogether there were 2,734 barrels taken this year against 2,631 barrels for the year 1892. The most important oyster beds of the island are in the River Dennis Basin, Inverness County, covering an area of about ten miles. Oysters are fished in this district with very crude appliances. The principal markets are found in St. Pierre, Miquelon and in the cities and towns of Nova Scotia and New Brunswick. Last season a few barrels were shipped as far west as Port Arthur, Ont.

The Cape Breton oysters are of an excellent quality, and I have no doubt, if the beds were properly cultivated, more modern appliances used in fishing, and the fishery more extensively prosecuted, the industry would become a very profitable one for Cape Breton Island.

MARKETS.

Canada, the West Indies and the United States are the leading markets for our fishing products. The greatest quantity, notably dry codfish are sold to Halifax dealers and from there reshipped to the West Indies. A good deal of our spring and fall herring are also disposed of in the same way, but our fat mid-summer herring are not suitable for such a hot climate. Salt salmon in barrels are also

shipped to the West Indies market. The best markets for green fish are found in Montreal and Quebec, this fish being shipped direct by rail and stream up the St. Lawrence. Of late years the demand for this kind of fish has increased and better and surer prices are now realized by our fish dealers. Mackerel, pickled and fresh salmon and smelts find the best market in the United States, although fish dealers say that the American market fluctuates greatly and prices for fish are uncertain.

I have dealt with the subject of the protection afforded the fisheries of my district in a preliminary report and therefore deem it unnecessary to say more on that point.

Herewith will be found a synopsis of the reports of overseers in this district, all of which is respectfully submitted.

I have the honour to be, sir,
Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries.

SYNOPSIS OF FISHERY OVERSEERS REPORTS FOR THE ISLAND OF CAPE BRETON.

CAPE BRETON COUNTY.

Overseer Francis Quinan, of Sydney, reports that lobster fishing began in his district on May 20th. Three factories were operated, the most successful of which was situated at Southern Head, Cow Bay. The other two factories were not fitted out for extensive canning and consequently only put up a limited quantity of goods. High winds destroyed many of the lobster-fishermen's traps. Of the season's pack 740 cases were shipped to Boston, and 447 cases were shipped to Halifax. The goods forwarded to Halifax and the result of the output of two canneries was found to be damaged, the meat becoming black owing to bad canning. The 447 cases were afterwards re-shipped to St. Pierre, Miquelon, where a sale was effected.

The salmon catch was poor in his district owing to the fact that when these fish were making their appearance heavy storms occurred destroying fishermen's nets. In the spawning season an unusually large number went into the Sydney Forks River. The cod fishery shows an increase in catch this year; towards the close of the season cod were found very plentiful inshore; fishermen complain that in mid-summer cod are kept outside by vessels throwing gurry overboard.

The mackerel fishery was not a success with the local fishermen but American vessels did well outside. The mid-summer herring catch was poor, those fish being scarce; a quantity of spring herring was taken and disposed of for bait to vessels. The halibut catch shows a slight improvement over 1892. The fishing industry is not as vigorously prosecuted as in former years owing to the high rate of wages paid at the mines. Many of those who formerly fished are now engaged in mining.

The fishery regulations were well observed in his district, there being only two complaints, resulting in the offenders being convicted and fined.

Overseer Alexander McDonald, of East Bay, reports a decrease in the cod, herring and mackerel fishery in his district, which he attributes to the scarcity of these fish. From beginning to the end the industry was prosecuted by fishermen as vigorously as in former years. The season, therefore, has been a poor one for fishermen. The lobster fishery yielded the fishermen the best returns, the pack in his district being 4,840 cases over the previous year's pack. This increase is due to the extension of the season for fishery and fewer storms. The grounds were well fished.

The salmon fishery is not prosecuted to any great extent. Halibut fishing is an industry of the past owing to the scarcity of the fish. To trawl fishing is attributed the cause. Trout fishing was also poor, the waters in the rivers being low during angling season. Towards autumn, however, trout and salmon ascended the rivers in large numbers to spawn. The alewives catch is about the same as in the previous year. This branch of the fishery is not vigorously prosecuted as these fish visit the

bays and rivers in large numbers. Of the catch of cod 75 per cent is sold in the Canadian markets, herring about 30 per cent, and the full catch of mackerel and the lobster pack. The balance of herring and cod finds a local market principally in the mining districts. The close season was well observed, there being no violations. There are no fish-ways and none required in his district, there being no mills on any of the important streams. There are one or two shingle mills on unimportant streams but these mills are only operated in winter when the water is high. He recommends that the slats on each side of lobster traps for three courses upwards from the bottom be $1\frac{1}{4}$ inches apart. This would allow small lobsters to escape.

Overseer Wm. Burke, of Mira Ferry, in comparing the statistical figures of 1893 with those of the previous year, finds a general decrease in the catch of all kinds of fish in his district excepting mackerel in which there is an increase, more particularly in the district of Mira Bay and Main-a-Dieu. He attributes the decrease in the cod and herring fishery to the presence of dog-fish, which visited the fishing grounds in his district in July and remained till the middle of October, scaring fish and destroying the nets.

Squid for bait was plentiful and easily obtained during the latter part of the fishing season. The fish caught and cured in his district were marketed in Halifax, with the exception of 600 barrels of mackerel, sold in Boston. The following is the nearest approximation of marketed fish: cod, haddock, herring and alewives, 95 per cent; mackerel, 99 per cent; salmon, 10 per cent; leaving for home consumption the balance together with the entire catch of trout, smelts, eels and halibut. The fishery regulations were well observed in his district, only one violation having been discovered by him, a violation of the lobster regulations in which the offender was convicted. There are no nets or fish-ways in his district. The rivers were well guarded by himself and guardians. Three guardians are required in his district for next season during months of June and July.

Overseer Richard Hickey, of North Sydney, is pleased to report that the fishing season of 1893 has been a fairly profitable one for the fishermen of his division, all the principal branches of the deep sea and inshore fisheries with the exception of herring showing a satisfactory increase over that of the previous year. The statistics will show a slight decrease in the herring catch over the comparatively small yield of the year 1892. This is owing to the failure of the mid-summer or July run of herring during the past season. In a certain measure, however, were the fishermen recompensed by the appearance of an excellent run of herring in the harbours and bays during the latter part of the year just closed. These fish were of a very fine quality and large catches were made in some districts. It would be difficult to assign any direct cause for the falling off in this important branch of the fishery from year to year. Many of the fishermen are still of the opinion that the large numbers of lobster traps which line our shores from the first of the season until the middle of July serve to divert the course of the herring, thus keeping the first from entering the harbours and bays along our coast. Another cause likely to have a detrimental effect on both the mackerel and herring fishery may be attributed to the almost continual disturbance of our coastal waters by the many freight and passenger steamers plying between Cape Breton and the St. Lawrence, Newfoundland and other ports during the navigation season. The number of steamers engaged in the coal-carrying trade of this island has greatly increased during the past five or six years. It is an undisputed fact that before the appearance of so many steam vessels to our coastal waters the herring and mackerel fisheries were far more profitable than of late years. If the scarcity of mackerel and herring noted during recent years can be directly attributed to the last mentioned cause, then the fishermen need not hope for much improvement in future to these important branches of our fisheries, as steam is fast taking the place of sailing vessels in the transportation of coal from Cape Breton ports. The improvement in the other branches of the fisheries may be almost wholly attributed to the very favourable weather enjoyed by the fishermen during the season of 1893. Absence of any great or prolonged storms during the most important fishing months was a marked characteristic of the season. The quantity of fish used for home consumption may be put down at

about one quarter the total amount taken by all fishermen. The greater portion of the fish not used for home consumption was sold to Halifax fish merchants, while a small percentage was shipped to the Montreal market. The several close seasons have been well observed in his district during the past year. From a close observation and information regularly received from the most important districts of his division, he says that the law was never better observed by all classes of fishermen. The only violation of the Fisheries Act that came under his notice during the year was a slight infraction of the lobster fishery regulation at the factory of Messrs. L. Picket & Co., situated at Little Bras d'Or Inlet. On visiting this factory June 2nd he discovered several illegal lobsters in a lot of about 4,000 which had just been delivered on the premises. The matter was reported to the Inspector of Fisheries, with the result that a fine of \$12 was imposed on the proprietor of the factory. He states that he always found both the manager of the factory and fishermen well disposed to observe the law and does not think the violation referred to was intentional on either part. As the statistics will show the lobster fishery of his district for the past season was a very successful one, there being an increase of 11,950 cans in the quantity of lobsters put up by the Little Bras d'Or factory over that of 1892. Were it not for the great scarcity of bait during the latter part of the season a still greater increase would be shown. There are no important streams in his district to which the enforcement of the Sawdust Act applies. There are several small mills situated on unimportant streams, the owners of which are careful to keep mill refuse from falling into the water. There are no fish-ways in operation in his district. He is not aware of any recommendations that he could suggest which would be for the improvement or better protection of the fisheries of his division. He thinks, however, that if the deep sea fishery was prosecuted by vessels of a handy and convenient tonnage instead of comparatively small sail-boats as at present, the fisheries of this important district would rank first in value with those of any county in the Maritime Provinces.

INVERNESS COUNTY.

Overseer D. F. McLean, of Port Hood, reports an increase in the catch of the following branches as compared with that of 1892, viz.:—Salmon, herring, mackerel, lobsters, haddock, trout, bass, smelts, alewives, eels, squid, and a decrease in cod, hake and fish oil. The cause which he attributes to the decrease in the catch and yield of the last named branches is due to the fact that dog-fish has frequented the coastal waters in abundance, proving a source of injury to the fishermen by destroying fishing gear and devouring fish on trawl, hooks and in nets. The increase in other branches of the fisheries in his division is due to a more vigorous prosecution of the industry than during the preceding year, and dog-fish were not so plentiful during that part of the season the greater quantity of fish in the branches named were taken. He estimates the quantity of the fish caught used for home consumption at 10 per cent. About 90 per cent of the salmon; 95 per cent of the mackerel; 75 per cent of the lobsters; 75 per cent of the smelts; 80 per cent of the eels are exported to the United States, the remainder is sold in Canada, part of which may possibly be exported to other countries afterwards.

Nearly all the codfish, haddock, hake and salted herring are sold in Canada in the first instance, about 80 per cent of which is re-shipped to the West Indies and other foreign countries. About 20 per cent of canned lobsters is shipped to Great Britain and France. The catch of fresh herring is sold chiefly for bait to Canadian fishing schooners and such United States fishing vessels as procure licenses under the *Modus Vivendi*. The several close seasons have been strictly observed in his district. He frequently visited every locality where violations of the fishery laws would be likely to occur and found in every instance the fishery regulations complied with. The special guardians appointed for his district made similar reports to him. No illegal fishing came to his knowledge. The Sawdust Act has been complied with in his division by the mill owners keeping the same out of streams frequented by fish. The dumping of sawdust and other mill rubbish into streams is considered injurious. There are no fish-ways in his division. There was one trap-net under

license from the Department of Marine and Fisheries set at Hurd's Point, Port Hood, Inner Island, by John H. Murphy. The catch in said trap and value thereof for the season was as follows, viz:—

	Value.
Mackerel, 25 brls. salted.....	\$175 00
Squid, 40 do fresh.....	120 00
Herring, 10 do fresh.....	10 00
Codfish, 1,500 lbs. fresh.....	15 00
Total value.....	\$320 00

Nearly all the fresh fish named in the above was used as bait by boat and vessel fishermen. Before the end of the fishing season the storms did very considerable damage to this trap. He respectfully suggests that a provision be made of a compulsory character for re-stocking and leasing the oyster beds of the county of Inverness.

Overseer James Coady, of South-west Margaree, report an increase of 50 per cent over the year 1892, yet very few ascended the river in July owing to the water being low as a result of a dry season. Between the middle of August and September when the river became high the fish began to ascend to the upper waters. The lobster fishery he reports about the same as the previous year. The catch would have been larger were it not for scarcity of bait. The bait chiefly used for lobster fishing is spring herring and the poor catch of those fish made bait scarce and the fishermen as a consequence were handicapped.

The summer run of herring promised well but dog-fish made their appearance and not only frightened the fish but destroyed the gill-nets, causing a failure in this branch. The catch of mackerel shows an increase of about 20 per cent over catch of 1892. The abundance of dog-fish on the coast and unfavourable weather interfered with the fishery. The cod fishery shows an increase over the previous year, due to a more vigorous prosecution of that branch in the southern part of his district. Alewives also show an increase over 1892 of 685 barrels, which is double the average of the last few years. The catch of other kinds of fish is about same as taken in 1892. He estimates that 70 per cent of the fish taken in his district was marketed in Canada and the balance disposed of in the district for home consumption. One case of illegal fishing came to his notice, the offender being convicted and fined. Three unsuccessful attempts were made in his district at poaching. The offenders who escaped lost their boat and two nets, which were destroyed. The guardians did effective work in protecting the rivers in his district. The sawdust regulation was well observed. There are no fish-ways in his district and none are required.

Overseer David Ross, of North-east Margaree, reports an increase in the catch of salmon over that of 1892, of 5,355 pounds. The increase is due to more fish schooling on the coast in July than in former years and a more vigorous prosecution of that branch of the fishery.

The statistics show an increase of 1,960 cwt. in the catch of cod, due to favourable weather and a more vigorous prosecution of the fishery. There is also an increase of 1,002 barrels in mackerel and a slight decrease in the catch of herring. Mackerel were more inshore and the fall run more plentiful. The catch of lobsters shows an increase of 44,712 pounds over the previous year. This is due principally to the operation of an additional factory in his district. He estimates that about 10 per cent of the total catch of fish in his district was exported abroad and that 40 per cent was used for home consumption. The Sawdust Act has been strictly observed. There are no fish-ways in his district and no mills operated on important streams. Several attempts at illegal fishery were made and the offenders were all discovered and convicted in Fishery Court.

Overseer Lewis McKeen, of Mabou, reports the total catch of fish in his district in excess of the catch of 1892. The weather during the early part of the season was favourable, but after the 20th July it became blustery, entailing much loss of valuable

time to fishermen, thus bringing about a smaller catch of fish than would have otherwise occurred. The catch of salmon although small was in excess of the catch of 1892. Salmon were abundant in the rivers and streams during the spawning season, but owing to the drought which prevailed in midsummer these fish did not ascend the different streams until October. He reports a decrease in catch of herring confined to the summer run which was a complete failure. He can assign no cause for the scarcity of these fish. The herring fishery of his district during the last decade has not been of much commercial importance except affording a supply of bait for the prosecution of the other branches. The scarcity of herring materially affected the catch of cod and lobsters. There is nothing special to note in the mackerel fishery of the season. The catch was about same as last year's. This branch, once so profitable, has not been prosecuted to any great extent of late years. The decline of this fishery is a well known fact and has led to considerable speculation among local fishermen as to cause. Many believe the grounds were overfished by purse-seines and gill-nets. He reports an increase in the catch of cod, hake, and had-dock. The increase is due to more vigorous prosecution of these branches over 1892. During the past five years in his district an immense falling off in the catch of these fish has taken place. This is due to the fact that fewer boats are now engaged in this industry. Various causes have helped to bring about the change. The coal-mining, gypsum, and other industries carried on of late years in his district have drawn from "along shore" a number of people who formerly engaged in fishing. Three lobster factories were operated in his district during the season, the catch being greatly in excess of last year, notwithstanding that operations did not commence before 18th May. Lobsters were found large and plentiful. Towards the close of the season the weather became blustery, which also militated against the season's catch. He considers the season for lobster fishery too short. The catch of trout in his district shows no increase over the poor catch of 1892, caused by droughts, the water being too low in the rivers. There was an average catch of eels and smelts. The three last kinds of fish were exclusively used for home consumption. Two bag-nets were imported and attempts made to fish in Mabou Harbour, but proved a failure owing to the want of a strong current. About 50 per cent of the total catch of fish other than salmon were shipped to the Halifax market. The total catch of lobsters were exported to the United States.

Canned salmon and salmon salted were shipped to Halifax. The fresh article was used for home consumption. The fishery regulations were well observed, the guardians employed doing effective work. The Sawdust Act was generally observed, the mills having means to keep refuse from going into the streams. The milling is very limited in his district, and there are no fish-ways and none required.

Overseer Peter McEachen, of Glendale, reports an increase in his district in the catch of codfish and oysters, an average catch of trout and smelts, and a decrease in the catch of herring. There are 16 small saw-mills in his district and at each the law is observed. There are no fish-ways in his district, but he is of opinion that one or two are required. There were only two violations of the river regulations in his district during the season. The cases were promptly reported and dealt with in the Fishery Court. Two or three nets were discovered in the River Dennis and destroyed.

RICHMOND COUNTY.

Overseer D. Cameron, of St. Peter's, reports that while there is a marked increase in the catch of cod and lobsters in his district over last year's catch, there is a very serious falling off in the catch of mackerel and herring. The small catch of mackerel is attributed by local fishermen to the use of tuck-seines during the latter part of May and beginning of June, when mackerel are approaching the shores. The schools are intercepted some miles at sea and continually harassed by vessel fishermen equipped with seines. The schools are broken up and the fish scattered and instead of striking inshore the fish go further out into deep water. The decrease in the catch of herring, he believes is due to a less vigorous prosecution of that branch of the industry, as the return of boats engaged therein this season shows nearly 200

less employed than the season of 1892. There were also a large number of vessels engaged in the cod fishery this season, which fact in view of the large quantity of cod taken shows that cod must have been more plentiful than in the previous season. Respecting the market which Canada affords the native fishermen he is of the opinion, based on his own experience and that of merchants engaged in the industry, that only a very small percentage, about 10 per cent, of the fishery products are disposed of in Canada. This county, he thinks, is depending more year by year on foreign markets. The home consumption in his district is about 1 per cent of the total catch. The close season, he is pleased to report, is well observed. Not one case of illegal fishing was reported to him during the season. There are no mills to interfere with fish ascending any of the streams in his district.

Overseer Alfred Lenoir, of Arichat, reports an average in the total catch as compared with 1892. The lobster fishery commenced 1st of May, with a good run of lobsters of large size and the fishery continued fairly good until the close of the season. The eight factories in his district gave employment to 140 persons. Three offenders were convicted and fined during the season for taking illegal lobsters. The quantity of haddock taken is about the same as last year's catch. Vessels from his district engaged in cod fishing in the North Bay, did not do as well as last year, owing to stormy weather. Spring mackerel did not strike in the bays in his district as formerly. The cause of these fish not striking in he believes was owing to seiners fishing within the three-mile limit before the arrival of the cutters, and thus interfering with local fishermen. The summer herring fishery was poor, the cause for which is assigned to the large numbers of lobster traps placed in the coastal waters during the first of the season. There was, however, a few good runs of fall herring which partially made up for the deficiency in the catch of summer herring. Smelt fishery is poorly prosecuted in his district. He reports an increase in the number of vessels engaged in deep sea fishing. The fishery regulations were well observed.

Overseer John Murchison, of Grand River, reports an increase in the catch of cod, haddock, herring, alewives, pollock and lobsters, and a decrease in the catch of mackerel and halibut, as a result of the fishermen's labours for the season. He gives the following comparative statement of increase and decrease.

Increase.	Decrease.
Herring, brls. 91.	Mackerel, brls. 1,190.
Alewives, " 96.	Halibut, lbs. 3,500.
Codfish, cwts. 2,509.	
Haddock, " 1,463.	
Pollock " 136.	
Lobsters, lbs. 39,472.	

The shortage in the catch of mackerel in his district is chiefly attributed to American and Nova Scotian seiners who visit our shores about the first of June when the mackerel are striking in. The schools are broken in and the fish striking off shore, thereby causing much loss to shore fishermen. He thinks the presence of one of the cutters at the time mackerel are appearing on the coast would have a wholesome effect and prevent the purse seiners from encroaching inside the three-mile limit. The increase in catch of cod and haddock is attributed to a more vigorous prosecution of the line fishing. The catch of lobsters, although one cannery less was running, shows an increase over the previous year. The percentage of fish sold in Canada and foreign markets, he estimates at 85 per cent, leaving about 15 per cent for home consumption. The close season in his district was well observed during the year. The only violations were connected with the lobster fishery when four packers were convicted in Fishery Court for taking illegal lobsters. There are no mills on the streams in his district, with the exception of a small shingle mill at Loch Lomond and one at Grand River. The Sawdust Act is well observed by the owners of the mills. There are no fish-ways in his district.

VICTORIA COUNTY.

Overseer Wm. Hellen, of Aspy Bay, reports an increase in cod, haddock, hake, mackerel and salmon over the previous year. The increase is the result of these kinds of fish being more plentiful on the grounds than in the previous years. The catch would have been even larger were it not for the presence of dog-fish during the fishing season. He says had it not been for these destructive fish the fall mackerel catch would have been much larger at Aspy Bay, as fishermen were compelled to take up and repair their nets damaged by these ravenous fish. The herring fishery was a failure, there being a decrease this year of 91 barrels compared with the small catch of 1892. These fish did not strike in as in former years. The cause of their scarcity remains a mystery to fishermen. The salmon fishery was fairly good and had it not been for a severe storm which prevailed in June doing much damage to salmon nets the catch would have been larger. This fishery is capable of greater development, but the average local fisherman does not give it as much attention as some of the other branches.

The lobster pack was about the same as last year, notwithstanding there was one more factory engaged in packing. The fishermen in his district reported lobsters scarce throughout the fishing season. About 80 per cent of the total kinds of fish taken is marketed at North Sydney and Halifax. The balance is used for home consumption.

The regulations were well observed, there being no violations since his appointment. The Sawdust Act was well carried out, no refuse finding its way into the streams from any of the small mills. There is only one fish-way in his district, which is in good repair.

Overseer Donald McQuarrie, of Middle River, having an inland district the fishery is not very vigorously prosecuted. He reports a decrease in the catch of cod, herring and alewives and an increase in salmon, mackerel, oysters and the smaller kinds of fish. He assigns the cause of the decrease in cod to trawling by vessel fishermen. An effort was made at Gillis Point in the Bras d'Or Lakes to test the lobster grounds, where a small cannery was operated. The result was a failure. Lobsters were found large, but scarce. He finds it difficult to give accurate figures of the percentage of fish exported. Excepting what is used for home consumption, all the cod is marketed in Canada. All the oysters taken in his district and a third of the quantity of alewives were also marketed in Canada. He reports that the close seasons were well observed, and has no recommendations to make regarding the existing laws. The guardians he found vigilant and faithful to duty, and offenders who attempted to poach were discovered by them and dealt with in the Fishery Court. Both the Middle and Baddeck Rivers were teeming with parent fish during the spawning season, which were well protected by the guardians from poachers. There are no obstructions to fish ascending the upper waters from mills, and no refuse finds its way into the rivers or streams.

Overseer Chas. L. Campbell, of New Campbellton, reports a decrease in the catch of salmon of 117 brls.; herring, 1,047 brls.; mackerel, 229 brls.; cod, 1,312 cwt.; haddock, 197 cwt., and squid, 1,482 brls. There is an increase of 2,900 lbs. in halibut; hake, 140 cwt.; lobsters, 17,022 cans, and salmon, 800 cans. There were no halibut or salmon in cans last year. The cause of the decrease is scarcity of fish and the presence of dog-fish which interfered with gill-nets and trawls, and frightened the fish into deep water. Then again, in the vicinity of the entrance to Big Bras d'Or, a number of fishermen were employed during part of the season at the coal mines there which were opened up this year. To the extension of the season is to be attributed the increase in the catch of lobsters, particularly at South Bay, Ingonish, where this fishery was good during the whole season. One of the factories at Ingonish and the one at north shore were also engaged in canning salmon, but owing to the scarcity of fish, only a small quantity was put up. There were three fish-traps located in his district this season, neither one of which paid the cost of operating them. The cause is attributed to the scarcity of fish and unfavourable weather. There are no fish-ways, and no mills on any of the important fishing streams in his district. The close seasons have been well observed, and he reports that the guardians were vigilant in the discharge of their duties.

DISTRICT No. 2.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 2, NOVA SCOTIA, COMPRISING THE COUNTIES OF CUMBERLAND, COLCHESTER, PICTOU, ANTIGONISH, GUYSBOROUGH, HALIFAX AND HANTS, FOR THE YEAR 1893, BY INSPECTOR ROBT. HOCKIN.

Hon. Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my fifth annual report of the fisheries in District No. 2, province of Nova Scotia, together with tabulated returns showing quantities and values of each kind of fish caught, as well as comparative tables showing the increase and decrease of the fisheries in each county; also the increase and decrease of the catch of each kind of fish.

The improved statistical forms issued this year has resulted in a more accurate return of the value and number of nets, traps and other material used in prosecuting the fisheries.

The value of the catch within this district for 1893 was \$1,427,605 as compared with \$1,357,208, an increase in value of \$70,397.

This increase has been slightly affected by the fact that the new forms include some kinds of fish which had been previously overlooked, but only to the extent of about \$6,500.

In view of the greater care exercised in collecting these statistics during the past few years and which has resulted in the fluffiness being removed and the estimates given from a substantial basis of facts, I am of opinion that although the figures do not show the result as an average catch as compared with the past eighteen years, that nevertheless it has been an average year and perhaps slightly in excess.

Decreases are noted in the herring fishery of about 30 per cent, in the cod family of about 6 per cent, in shad of about 25 per cent, while there has been an increase in the catch of salmon of 25 per cent, of alewives 13 per cent, of smelts 15 per cent, and of lobsters of about 10 per cent.

The increase in the salmon fishery has been almost wholly in those counties bordering on the Bay of Fundy, where the catch has been unusually large and the largest recorded for the last fifteen years.

Of the Atlantic counties Guysboro' shows a decrease, 1,200 lbs., while in Halifax 8,500 lbs. have been taken in excess of the catch of last year.

In those counties bordering on the Straits of Northumberland a decrease of 2700 lbs. is recorded from Antigonish, while Pictou county returns an increase of 3,700 lbs.

In the herring fishery it is noted that while there is a decrease as compared with 1892 the catch has been about equal to that of 1891.

In the mackerel fishery the value of the catch was about equal to that of last year but this equilibrium was only maintained by an unusual catch of fall mackerel in the western part of Halifax county.

The increase of ten per cent in the value of the lobsters taken over last year is almost altogether from the Atlantic counties, indicating that the unusually favourable weather during the season when this fish may be legally taken has contributed in a large measure to this success and that it is not due to any increase in the fish.

It is gratifying, however, to observe that the season regulations have had the effect of staying the depletion of this fishery: but the effect of this success upon the fishermen has been upon the Atlantic coast to increase the tendency to violate the season regulations and catch lobsters in the autumn months, reasoning as they do that the restrictions of the regulations are unnecessary because the fish are not decreasing. Thus when the season is unsuccessful it is urged upon behalf of the

fishermen that they must fish or starve—while the past season has shown they will fish under any circumstances, and it is only the strong arm of the law that will prevent them.

In the interest of law and order as well as of those who abide by the regulations, it seems to me to be necessary that neither expense nor pains should be spared to enforce the law.

Severe measures were adopted last season and a number sent to prison. The results of the labour of the fisherman should be rendered nugatory by having the cases containing legally caught lobsters stamped so that they could be identified and that all others be liable to confiscation.

This subject has been dealt with in former reports, but the necessity of adopting this method is becoming yearly more urgent because of the increasing tendency to illegal fishing.

It has been remarked by several of the overseers that in order to escape detection, salmon poachers disguise themselves by various means, burnt cork being a favourite method.

Torch lights on a river should be prohibited during the close season for salmon, except by permission from a fishery officer.

Spearing of eels, which is too frequently made an excuse for the appearance on the river with torch and spear, should be prohibited during October and November in this district.

In addition to fines inflicted on view by the overseers, the following have been tried before the Inspector :—

Six complaints for having lobsters in possession without lawful excuse.

Six complaints fishing for lobsters at a time prohibited by law.

Two complaints fishing for salmon at a time prohibited by law.

One complaint for fishing for salmon with a spear.

Six complaints for using a net or other apparatus for the capture of salmon above tidal waters.

One complaint allowing saw-dust to drift into a stream flowing into navigable water.

Five complaints allowing saw-dust to drift into a stream frequented by fish.

The complaints were in every case laid by the overseers.

Seven cases were dismissed for want of proof, and fines were inflicted in the others.

The work in connection with the Inspector's office during the past year has included the auditing of 300 accounts, examination of 1,600 reports, drawing plans and prescribing specifications for fish-ways, collecting bounty claims, holding courts and conducting correspondence in the several counties at which 27 cases were tried, covering 1,135 pages of the letter-book; also travel by highway 670 miles, by steamer 530 miles and by rail 5,313 miles.

The service rendered by the fishery guardians is paid in accordance with the actual time on patrol duty as certified by the overseers.

This system which has lately been brought into operation has been attended with good results and a fair return is given for the money spent, for the protection of the rivers.

Herewith follows a synopsis of the overseers' reports.—

Overseer Rowlings, of Halifax, says: There has been a decrease in the quantity of herring, mackerel, pollock and hake and a slight decrease in salmon and alewives.

A considerable increase in cod and haddock and a large increase in the catch of lobsters.

Cod and haddock were as plentiful on the shore as they were for a number of years past, while the vessels which fish in North Bay returned with an average catch.

All the fish caught in his district are sold at Halifax, and he believes the greater part are shipped from there to the West India Islands.

The principal abuse has been the canning of lobsters. He has some doubts about the proper time for a close season, and thinks inquiry should be made as to the con-

dition of the lobster in the fall for canning purposes. He has seized and confiscated a number of cases of lobsters and has had a number of persons convicted for canning lobsters during close season, some have paid, others have been incarcerated, while some have yet to be dealt with.

The close season law should be vigorously enforced or else fishermen should be allowed to fish two months in the fall.

As to suggestions, he can give none better than has already been given, that fish caught in season should have a departmental stamp; all others confiscated.

With regard to close seasons other than that for lobsters, they have been well observed. The large mills cart out their saw-dust and the smaller ones wheel it out, although in every case a portion goes into the water.

There are seven fish-ways in his district and are fair of their kind, most of them being channels dug round the end of the dam.

A dam on the Lawrencetown River, owned by one Bayer, needs a fish-way very much.

He suggests that a most effective way of preventing illegal fishing would be to give one-third of the proceeds of all fish confiscated to the informer, one-third to the officer, and the balance to the department.

Overseer Bartlett, of Terence Bay, Halifax, says: In forwarding you statistics for 1893, I beg to report as follows:—

Compared with the previous year, there has been a slight increase in all and every variety of fish, more particularly salmon, trout, herring and mackerel.

During the month of September, about 1,800 barrels of mackerel were captured by seines in Prospect and St. Margaret's Bay. A storm immediately at hand prevented the catch being much larger.

About one-eighth of fish caught, mackerel excepted, is consumed in Canada, the balance being exported to United States and West Indies. Mackerel, I may say, are all shipped to the United States.

Regarding the amount of fish consumed at home, I may state, that except herring, few, if any other kinds of fish are kept from market.

I am, therefore, of the opinion, that our fishermen, on the whole are slightly better off than last year, though the price of fat mackerel is very low indeed.

The prices of other kinds of fish are about the same as last year.

From inspection and inquiry while at Hosier's River, I found the river completely blockaded with logs, refuse lumber and saw-dust, thus completely preventing the ascent of salmon and other fish into the lakes above the mill-dam.

Quite a large number of salmon visited the river during the season.

Would strongly recommend removal of obstructions above mentioned. Such removal would require fully twenty or twenty-five dollars, and as it is impossible to clear the river this autumn, it should be attended to early in the spring.

I further consider that river guardian be employed five months, viz., from April 1st to August 31st. This river requires considerable surveillance, as certain parties are inclined to poach.

At Big North East (Indian River district) saw-dust still continues a nuisance and should be removed. Fish-ways on Indian River in splendid condition and doing effective work.

That on Ryno-Dam should be raised fifteen inches, the mill-dam having been raised since fish-way was placed in the river.

On Melvin Dam, nine miles from mouth of the river, fish seem to collect, and being unable to ascend, poaching is carried on to a vast extent, thus requiring more time from the guardian (Nathaniel Mason) than he can bestow.

Little North East badly obstructed. The mill was burned some time ago, and the dam is therefore practically closed. If possible, owner of mill should be compelled to open the dam in order to clear passage-way for fish, salmon and trout especially.

I am pleased to state, that as nearly as at all possible the close seasons have been strictly observed, though there has been a strong tendency to encroach on the law's respecting lobsters but, sir, the law has, I may say, been strictly enforced.

In conclusion, sir, I beg to say that I consider, one and all of the river guardians around St. Margaret' Bay, to be trustworthy and efficient officers.

Overseer Robert Gaston, of Pope's Harbour, Halifax, reports:—

There has been an increase in codfish and lobsters this year, a decrease in all others kinds of fish, the cause being a scarcity. Good prices obtained, all being sold in Canada.

There was illegal fishing, this came to my knowledge. I visited the localities several times but never could catch the parties in the act, as they had spies set everywhere. I destroyed all canning gear I found about the woods.

The Saw-dust Act was not observed by mill-owners and is not considered an injury to fisheries, but considered one to the harbour as it is filling up very fast.

There are four fish-ways in my division, all in good repair but the one at Moser's river.

Overseer Cameron, of Guysborough, reports the catch of salmon 27 per cent below that of last year, which, however, was exceptionally good; of herring, 25 per cent decrease. The fishermen say that these fish were plentiful outside, but were kept off shore by stormy weather and north winds. It is said these fish go with the winds, while mackerel go to windward.

Mackerel, a decrease of 24 per cent, mainly owing to the almost complete failure of the spring mackerel fishery.

The fish were as plentiful as heretofore, large bodies having gone into the Gulf of St. Lawrence, but they did not come on the coast as in former years.

The summer and fall fishery was fair and about equal to last year.

There was an increase in the catch of lobsters of about 10 per cent, ascribed to more favourable weather for fishing and more fishermen engaged in the fishery.

An increase of 11 per cent in cod, which were more abundant, and squid for bait plentiful.

Pollock have been very scarce for many years. About thirty years ago they were hauled with seines, and they appear to be again increasing.

Halibut are very scarce, but the catch this year is 50 per cent over last year's.

More smelts were taken because the steady cold weather of last winter made ice good. Squid were very abundant. Some vessels jigged all the bait they required and thus rendered trap-net fishing rather unprofitable.

Had there been a demand the catch could have been increased indefinitely.

WHERE MARKETED.

Salmon: 90 per cent exported to United States.
10 do used for home consumption.

Herring: 95 do sold in Canada.
5 do exported to United States.

Mackerel: 95 do exported to United States.
5 do sold in Canada.

Lobsters,—All exported.

Cod and haddock: 90 per cent exported to West Indies.
10 do sold in Canada.

Pollock,—All exported.

Smelts: 75 per cent exported to United States.
25 do used for home consumption.

Alewives: A few used for bait.

The bulk exported to West Indies.

Squid,—All used here.

Fish oils: 75 per cent sold in Canada.
25 do exported to United States.

The above are approximations. The exports of fish and fish products could be obtained more accurately from the customs entries outwards.

ABUSES.

Many of the fishermen ascribe the failure of the spring mackerel fishery to the operations of the United States purse seiners. The fishermen allege that mackerel are very timid and easily turned aside from their course; and they assert that by dashing at the mackerel with the purse seines they divert them from their course, drive them offshore and cause them to seek safety in deep water. Last spring the weather being fine and clear, the purse seiners were enabled to watch the mackerel and to keep along together with them from Cape Sable to Cape North; and our fishermen affirm that the mackerel adjacent to the coast and which would be likely to supply the inshore fishermen were driven off by the purse seiners. Our fishermen recommend as a remedy that the fishery protection cruisers come early on the grounds, say about the fifth day of May, that they join the American fleet at Cape Sable, and keep in company with it to Cape North, and that all along the coast they keep the purse seiners well outside the territorial waters of Canada. Our fishermen maintain that this is particularly necessary off the mouths of Chedabucto and St. Peter's Bays which were not entered at all this year by spring mackerel, although the purse seiners made good hauls. The cutters generally do not arrive until the mackerel and the fishing fleet have entered the Gulf of St. Lawrence: and after the spring trip the American seiners go home and do not return for some time. There may be something in this statement of the fishermen. One fact stands out clearly, —the fishery cruisers arrive too late. They should patrol the coast from the first appearance of spring mackerel and for about three weeks afterwards. They would thus prevent the illegal capture of mackerel within our waters, and at the same time greatly please the fishermen and abate the present grievance.

CLOSE SEASONS.

The several close seasons have been strictly observed. Special guardians have patrolled the principal rivers.

ILLEGAL FISHING.

But one case of illegal fishing came to my notice. And in this case, as there may have existed in the mind of the defendant a belief that he had a right to set his nets as he did, I was instructed that it would be sufficient for me to write him that nets so set are in violation of law and that it had been deemed advisable to suspend proceedings against him, but if set in the same way another time, he would be severely punished.

SAW-DUST ACT.

There is no attempt made by the mill-owners to prevent the saw-dust from falling into the streams; but the mills and streams being small, I do not think there is much injury done to the fisheries by the practice.

FISH-WAYS.

There are no fish-ways in my district. Some years ago there was one built in Chisholm's dam, Salmon River, but it is not there now. However, as the dam is situate fifteen miles from the river's mouth, and as there is a large lake down the river from the dam, I consider the spawning ground is ample. Clam Harbour and St. Francis Harbour rivers are the other two principal streams, and there are no mills upon them. Besides these three, the other streams are small and the dams are at a considerable distance from their mouths.

Overseer Allen McQuarrie, of Sherbrooke, Guysborough County, reports:—

His returns are carefully compiled from the most reliable sources, not so much from fish merchants as from the fishermen themselves.

It will be observed that the results do not differ materially from those anticipated in my preliminary report sometime ago.

This year, he has to report a serious decrease in mackerel, herring and smelt, and a less one in cod, trout and salmon; he regrets having to report a shortage in our staple fish of over 70 per cent in mackerel, 69 per cent in herring and 46 per cent in smelt, and from 5 to 7 per cent in salmon, cod and trout. In mackerel, herring and smelt, the decrease is owing chiefly to the scarcity of fish, as neither kind appeared on the shore in quantities sufficiently numerous to justify the fishing for them either in summer or fall.

The rivers were unusually low in the early summer, and the salmon, trout and smelt did not visit our streams as plentifully as usual, but later on with a rise of water, large numbers were seen to ascend the rivers, and we look for returns to be more plentiful next year.

When cod fishing was at its best, the fishermen were lobstering, which proved very lucrative this season, as will be seen in the increase of 24 per cent canned lobsters, and after lobster fishing closed, the cod were at a greater distance from shore and the fishermen in their too eager pursuit of lobsters neglected their outfit for deep-sea fishing,—the larger boats have almost disappeared among them and the small lobster boats are insufficient to go out the distance necessary to secure codfish, consequently the decrease in cod.

There is also a decrease in trout and smelt as well as in salmon, and, I judge the cause to be low water and a less vigorous prosecution of the fishery.

I would suppose that about 75 per cent of our fish were exported; as much as 6 or 7 per cent used for home consumption.

About the only abuse that I am aware of and troublesome and expensive to contend with is in connection with the lobster fishery, the close season of which there appears a mania to violate. The preventive measures used are the cutters patrolling the harbours and coves and destroying traps, and a patrol guardian on shore scenting up information against the poachers; but both methods have signally failed in crushing it out, yet I believe all the poaching amounts to but very little, as the main factories are kept closed and giving no encouragement to the poachers. I believe all this poaching is more, a defiance of an unpopular law, than a desire to be or make it a profitable employment.

A better way, perhaps would be, of defeating these lawless violators and stopping their poaching, that all legitimate canned goods be labelled or branded by a Government officer soon after the season closes and they are cased up and ready for the market, and that afterwards, any cases that were found not so labelled or branded, would be liable to confiscation and a heavy penalty imposed on any party buying the same or having in possession. This would at once spoil the sale of the goods as being too risky to meddle with, and few, if any could afford the risk and delay of hiding them away until next spring. It has often occurred to me that the above plan could be made more effectual than the present mode, and it would at least take time to invent new tricks to evade the law, which they usually find out after a while.

There is an idea very common among the fishermen, that boat fishermen are not fairly dealt with in the distribution of the bounty, and that large boats are entitled to more bounty than small skiffs, in the same ratio with vessels, say boats from 13 to 17 feet, \$1.00; from 17 to 22 feet, \$1.50; and from 22 feet upwards, \$2.00. Embodying a proviso of this kind in the regulation would tend to overcome their hostility and convince them of the equity and justice with which the bounty was being distributed, the difference in amount would be only trifling, but it would be so much encouragement to build the larger boats for the deep-sea fishing, as our best fishery seem to be yearly receding farther from the shore and the large boats are now indispensable to the fishermen's success.

Another opinion that has a strong hold on them, is that vessels fishing beyond the three mile limit or out on the banks are receiving too much bounty, in fact are not entitled to any, while large boats are not getting enough.

I think in all fairness there should be some line drawn in paying the bounty between a 13 feet flat worth only \$10 and a large boat worth from \$150 to \$200.

I merely make the above suggestions to bring those matters before you as subjects warmly discussed by fishermen and worthy of your consideration.

The other close seasons have been well observed and much credit is due to the unceasing watchfulness of guardians who patrol the districts and make weekly reports of their doings.

There was no illegal fishing came to my notice this season, with the exception of a few undersized lobsters at Marie Joseph and Liscombe factories, where small fines were imposed and remitted to the department, as already reported.

Saw-dust and mill rubbish do occasionally annoy the salmon fishermen, but is chiefly accidental, as the exception, and not the rule, and considered by all as very injurious to the fishery.

In my division, there are only three fish-ways, two of the Rogers and one of the Hockin's patent ; they are all kept in good working order by guardians who keep a close watch as to their efficiency to insure a free passage for fish.

The breach at Indian Harbour has been closed up on several occasions this summer and for weeks at a time, which inflicts a perceptible injury on the fishery of this district.

There is a large brook, a tributary of the west branch of the St. Mary's at Smithfield, choked up with logs, stumps, and brush, forming a complete barrier to the passage of fish. It has been a famous resort for alewives and trout, and even salmon has been seen there, but of late years no fish has been able to overcome this obstacle. Probably \$20 would be sufficient to clear it out and I would like to see the amount granted.

Wine Harbour brook now affords an excellent passage for trout, alewives and smelt to the fine lake at its source, and the small expenditure made in clearing it out has been fraught with the best of results and a great boon to the inhabitants.

There are several lumbering dams on the west branch of the St. Mary's and its tributaries that should be furnished with fish-ways as soon as possible, for the streams are all frequented by fish, and Messrs. Miller & Co. are still building additional dams and obstructing the passage of fish in those streams without leave or permit.

I omitted in the proper place to mention the meagre yield of fish taken in the fish-trap at Nix's Mate. It proved an absolute failure, they did not realize enough to pay the \$40 license money.

The general scarcity of fish is the only cause they assign for the failure.

Overseer Allan McPhie, of Avondale, Pictou County, reports in his opinion fish-ways ought to be placed in all mill-dams across streams frequented by salmon or other sea-fish.

There has been an increase in the catch of salmon in this division, and a decrease in the catch of lobsters, cod, hake, and other fish.

He is unable to account for the falling off in lobsters but believes that stormy weather is the principal cause of the deficiency in cod, &c.

Nearly all the salmon, smelts, eels and lobsters are exported to the United States.

The close season has been well observed in this division. All the lobster canneries closed on or before the 6th of July.

Special guardians seized one salmon-net and three trout-nets during the present season. The names of the owners could not be ascertained.

The saw-dust law has not been well observed by mill-owners, and in his opinion much injury is being done to fish thereby.

There are no fish-ways in this division, and fish are prevented by dams from reaching the head waters. However, if fish-ways are built additional guardians will be required.

More special guardians are necessary, one at Upper French River, and one on the east branch of Barney's River ; and in his opinion all torching ought to be prohibited during the time salmon are running up the streams.

Overseer John D. McQueen, Little Harbour, Pictou, says he has taken a good deal of pains with his report in order to have it accurate. The catch of fish in this division

of the county has been about an average for salmon, herring, mackerel, while codfish has been more plentiful. Lobster were scarce at the first of the season but improved nearer the close. Codfish were plentiful on this shore during October and November, something never known before. There has been a good deal of poaching on the rivers during the months of October and November, and I find that it is a very difficult matter to protect the fish in spawning time. These outlaws come in numbers and always in disguise, so that it is impossible to identify without arresting, and one man cannot arrest one of three (or in many cases six) of these characters, as they are bad characters. The disposition to poach was more apparent this season than I ever witnessed since the date of my appointment. I would suggest that the law be so changed that any person found at a river (during the season when fish frequent for spawning) in disguise be arrested, fined and imprisoned, as the fact of a man being found there in such a condition should be regarded as an evidence of guilt. There is only one fish-way in his division, which has lately been constructed, consequently it is in good condition.

One person was fined by him for fishing for salmon in Sutherland River in October of last year. Two other cases were reported to the inspector for action.

The special guardians on Sutherland River have done their duty well and faithfully.

Regarding the Saw-dust Act it has been pretty generally observed by mill-owners. So far as he has been able to judge there has been due care exercised during the last year, as they were aware that any infringement would result in a fine.

Overseer John McDonald, of Doctors Brook, Antigonish County, says there has been a large falling off in the catch of cod and also of hake, particularly the latter.

At the first of the season hake were very plentiful and the prospects good until the storm of the 21st of August, after which date very few were caught.

It is the opinion of many, and in which he concurs, that the injurious effects of trawling are becoming visible.

Year by year since trawling began the fish are moving further from the shore.

Spring herring were very plentiful, but are not much fished, being only valuable for bait.

He has no violations to report. He had fined some persons for violation of the lobster regulations.

He urges the erection of a fish-way on the mill-dam at Middle South River, also in two mill-dams on the Bayfield River.

Overseer Davison, Little Bass River, Colchester County, says the catch of shad is the smallest since he has held office as fishery overseer, and again he urges that the depletion of this fishery is owing to the destruction of the gravid fish in the Shubenacadie River, that the present close season is not sufficient, but that instead, during the time these fish are in the river for spawning none of them should be caught.

There was a much larger catch of salmon than there has been for quite a number of years, the fish being larger and more even in size than they usually are.

Of other fish there has been an average catch.

Nearly all the fish caught were sold in the province of Nova Scotia, a very few in New Brunswick.

The close season has been pretty generally observed. Reports of illegal fishing have come under his notice which are being attended to.

Many of the large mill-owners use their saw-dust as fuel, no refuse is dumped into the water.

When the river is rapid and saw-dust deposited near the mouth, it is not considered to be injurious to the fisheries.

Some fish-ways of the old pattern formerly existed in the district; there are none now. Notices have been served upon mill-owners.

He would recommend five fish-ways: two in Five Islands, on the North and East Rivers, one in Bass River and two in Chiganvise River.

Overseer Pollock, of Stewiacke, in the county of Colchester, says there has been a large increase in the catch of salmon on the Stewiacke River. Last year, he returned 600 pounds, this year there were 3,000 pounds taken.

This he believes to be due to a better protection. After careful observation he believes the fish are almost all mature fish, and he can find no satisfactory evidence that the increase is the result of the hatcheries.

There was an increase in the gaspereaux. These fish are shipped to Halifax and sold for bait, as they arrive before other bait fish.

A larger number of shad were taken, owing to the condition of the river when they arrived. If when the shad come in the river for spawning purpose the season is wet and rainy and the rivers consequently high very few fish are taken.

The close season was well observed in tidal waters, but above there were violations of the law of which the guardians with himself had failed to get evidence to convict.

Three nets were taken out of the river and destroyed.

He had one complaint *re* saw-dust, and on notification the parties stopped at once. There is no injury done to the fisheries in his district by saw-dust.

There is but one fish-way in his district, which has just been finished; it appears to be efficient, but was put in too late to be of service last season.

On Green's Creek, at the head of the tide, is a dam about 15 feet high, which should have a fish-way, for this stream was formerly a famous one for gaspereaux.

Overseer George Gilroy, of Oxford, Cumberland County, reports a small increase in the catch of salmon and alewives, owing, however, to a more vigorous prosecution of the fishery.

All the salmon caught in his district are sold in Canada. Alewives are exported largely.

The close season has been fairly well observed, but in the close season for salmon there were quite a number of poachers to contend against, so much so that a third guardian was employed for a short time.

The guardians appointed proved faithful and trustworthy and have given the best satisfaction that has been given by any guardians since he has been overseer.

There were nine salmon nets seized and destroyed, eight by the guardians and one by himself, and evidence has been submitted which, it is expected, will convict one poacher, and two others were fined.

The Saw-dust Act is not being observed by the mill-owners, but no other mill refuse is allowed to drift into the stream. He does not think it is considered that much injury has been done to the fisheries by saw-dust.

There are six fish-ways in his district. Five of them are in good repair, but one on Black River has not been in repair for some time.

He has no suggestions to offer for the better protection of the fisheries, but he thinks that the close season for salmon should not commence until the middle of October, for they do not enter the river until about the first of September; they remain in the tidal waters until about the middle of October, and as the Act deprives the inhabitants of any participation in the fishery it is almost impossible to restrain them from violating the law.

As the conditions are quite different in these rivers from nearly all others on the Atlantic coast, he thinks some concession should be made.

Overseer Elijah Fowler, of Wharton, in the county of Cumberland, reports that there are several localities in his district from which returns of fish taken were formerly received, but last year owing to so many being engaged in the wood business, the fisheries were not prosecuted, notwithstanding that salmon were particularly plentiful.

All the fish taken in his division are used for home consumption.

Two persons were fined for violation of the fishery laws before the close season, and a number of mill-owners were fined for violation of the Saw-dust Act.

There are three fish-ways in his division, all in good repair.

There should be at least six more built; and he is determined to see that this is done, for he believes that the want of fish-ways is more injury to the fisheries than the saw-dust.

Overseer Wm. B. Smith, of Maitland, Hants County, says the catch of shad is less by 50 per cent this year than last. Last year fifteen boats fished, this year only eight.

There has been a large increase in the catch of salmon, which were taken while drifting for shad.

Fish caught are all used for home consumption.

The Saw-dust Act was partially observed and what little gets in the river does not injure the fishing.

Overseer J. B. Colter, of Milford, Hants County, says about half of the fish taken in his district are sold in Halifax and the balance are used for home consumption.

There was an increase in the catch over that of last year. Had the water not been so high he believes there would have been more fish taken than has been for thirty years.

No violations of law have come to his notice. The Saw-dust Act has been observed. There are no fish-ways in his district.

I have the honour to be, sir,

Your obedient servant,

ROBERT HOCKIN,

Inspector of Fisheries.

DISTRICT No. 3.

ANNUAL REPORT OF THE FISHERIES OF DISTRICT No. 3 OF NOVA SCOTIA, COMPRISING THE COUNTIES OF KING'S, ANNAPOLIS, DIGBY, YARMOUTH, SHELBURNE, QUEEN'S AND LUNENBURG, FOR 1893, BY INSPECTOR J. R. KINNEY.

YARMOUTH, N.S., 31st Dec., 1893.

Honourable Sir CHARLES H. TUPPER,
Minister of Marine and Fisheries.

SIR,—In submitting the customary annual fishery statistics, I beg to call your attention to the decrease in the value of the products. This shortage being attributable to the lessened take of cod, herring and mackerel; these three items when compared with the products of 1892, standing thus :

Cod.....	short	38,932 cwt.
Herrings	"	16,231 brls.
Mackerel	"	10,240 brls.

This loss is to a considerable extent made good by the increased catch of lobsters, alewives and salmon; these items standing thus :

Lobsters, shipped alive.....	increase	1,450 tons.
" preserved	"	55,138 cans.
Alewives.....	"	4,971 brls.
Salmon.....	"	28,187 lbs.

I have the reports of the several overseers of the district, but fail to gather from them any data other than conjectures as to the causes for the increased take of one kind of fish and the almost total failure of others.

LOBSTERS.

The increased take may be attributable to two causes: first, the increased number of those employed in the industry; and secondly, the fishermen have learned the once popular idea that these fish were to be taken only in inshore waters, has been exploded, hence this branch of fishing is now largely conducted miles at sea.

The present fishery regulations are satisfactory, with, of course, the exceptional cases—one of which is that in some localities where winter fishing cannot with any degree of success be carried on—the fishermen do not feel satisfied that others more favourably located shall reap the good results of the good prices obtained in the early part of the year.

It is regrettable that many of the packers buy and pack the "berried" fish. In this connection I would again urge that the packer be licensed, such license to be cancelled upon proof of wilful violation of the regulations.

ALEWIVES.

The aggregated take of this fish in the counties of Annapolis, King's and Yarmouth has nearly doubled that of 1892, whilst the other counties report no marked increase. The rivers Tusket, LeQuille and Gaspereaux show the greatest increase. The county of Shelburne, where considerable sums of money have been expended in clearing the streams of obstructions upon the assumption that such a course would prove a benefit to the alewives fishery, has shown no marked improvement.

MACKEREL AND THE COD FAMILY.

Shad a decided decrease. The autumn run of mackerel not making their appearance and the run of spring fish being a slim one.

SALMON

Exhibit a phenomenally large run in King's County, but not at the mouths of the rivers. In this county the increased take was 200 per cent over the catch of 1892. And in the county of Digby the increase was 300 per cent, whilst Shelburne exhibits a shortage. The take on the Clyde falls short about 50 per cent.

I add hereto a few condensed extracts from the reports of the overseers.

Overseer R. F. Reid, Wolfville, in regretting that the salmon fishery on the Gaspereaux River is not as productive as desired, is inclined to believe that the large take of salmon in the bay, is attributable to the "planting" of former years.

Overseer J. S. Miller, Canning, says: "The coves were swarming with young salmon, as many as 300 to 400 being taken at one tide. These fish weigh from 5 to 7 pounds each, and it is thought that they are the product of the hatchery."

Overseer W. M. Bailey, Roundhill, says: "I would suggest that the law in regard to shad and alewives be so changed that no nets be allowed to be set after 10th of June in the municipality of Annapolis." His reasons for this suggestion are that under cover of fishing for shad and alewives the fishermen take salmon, but I think that the size regulation for nets is a sufficient protection. *Overseer Bailey* states that whitefish and salmon-trout, the product of the Bedford hatchery are making their appearance in his district.

The overseers state generally that the regulations have been fairly observed, the exception being the too frequent violations of the lobster-fishing regulations.

In concluding this report, I beg to state that a very undesired phase of the lobster business has been developed by the speculator who having on hand on the 1st of July lobsters legally taken hands them over for the purpose of obtaining better prices. The temptation to illegally fish and claim that the fish on hand were caught before the 1st July is too much of a strain on the average fisherman, hence the law is violated. It would, I believe, be wise that the words of the regulations be changed by striking out the words "without lawful excuse" and after the words "any lobsters" add "unless preserved."

I am, sir, your obedient servant,

J. R. KINNEY,
Inspector of Fisheries.

NOVA SCOTIA—DISTRICT No. 1.

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, Fishing Materials, and the Kinds and Quantities of Fish, as well as the Number of Men employed in the Fishing Industry of the Province of Nova Scotia, for the Year 1893.

Number.	District.	FISHING VESSELS AND BOATS.				FISHING MATERIAL.				KINDS OF FISH.							
		Vessels.		Boats.		Gill-Nets.		Seines.		Salmon, salted, brls.	Salmon, fresh in ice, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved (in cans), lbs.	Number.	
		No.	Value.	No.	Value.	Fathoms.	Value.	No.	Fathoms.								
																	No.	Value.	Men.
Cape Breton County.																	
1	From False Bay Beach to Long Beach			70	1716	96	3460	894		948	120	3400	70	600	1		
2	From Long Beach to Glace Bay and Bridgeport			5	250	10	620	165			15	1000	3	200	2		
3	From Lingan to South Bar and Sydney River			69	1030	87	3400	1146		1104	153	3000	10	800	3		
4	From Sydney to North-west Arm, Sydney Forks and Lake.			53	623	64	2200	550		550	80	24000		400	4		
5	Grand Narrows Bridge to Christmas Island			35	450	75	970	470		500	175		20		5		
6	Bosdale and George River			15	180	30	500	275		175	60		6		6		
7	Little Bras d'Or	6	871700	28	975	110	3112	990			225		37		7		
8	Sydney Mines and Big and Little Ponds			26	300	30	1000	550		1500	150		10		8		
9	North Sydney and Ball's Creek			17	275	38	1630	780		50	150		20		9		
10	Louisburg	1	17300	5	2000	101	6650	3325			300		640		10		
11	Big Lorraine			37	1880	82	16400	8200			370		480		11		
12	Little Lorraine			17	850	37	9000	1500	4	800	170				12		
13	Bauline			14	420	32	1150	575			62		80		13		
14	Main-à-Dieu			40	2000	91	7850	3925	3		85				14		
15	Mira Bay and River			64	1920	120	15000	6500	10	8300	110		380		15		
16	Kennington Cove			8	160	16	1250	625			30		60		16		
17	Scattarie Island			15	1400	40	900	450			20		54		17		
18	North side of East Bay			20	240	40	600	300			87		2		18		
19	Esksasoni			22	220	44	280	160			57				19		
20	Bonacadie			26	260	52	760	380			96		1		20		

21	Piper's Cove to Grand Narrows.	24	240	48	400	200	.....	.....	.....	.....	76	.....	2	.....	21
22	Fork's Lake	3	30	6	100	50	.....	.....	.....	.....	.....	.....	.....	.....	22
23	South side of East Bay.	36	360	72	700	350	.....	.....	.....	.....	75	.....	2	.....	23
24	Grand Mira	16	160	32	480	240	.....	.....	.....	.....	.....	.....	.....	.....	24
25	Gabarus and Belfry.	1	250	6	4800	2400	1	300	1200	.....	164	.....	184	.....	25	
	Totals.	8	119	2250	39	846	20369	1591	77232	35000	1	300	1200	17	14627	2830	31400	2072	2000
	Value.													272	2925	12735	392	29008	240

25 Gabarus and Belfry.....	143040	1238	..	84	20	.....	...	...	.....	12	..	.....	.....	600	.....	600	.....	30,524 60 25
Totals.....	319784	13877	21	2442	454	6625	14290	15050	747 31	265	8	157	600	8237	625 2780	75	78	
Value.....	44769	62446	63	8547	1362	66250	1429	752	3361 93	2650	80	628	30	3294	781 4170	37	1950	182,705 21

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, Fishing Material, &c.—Nova Scotia.—*Con.*

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.				FISHING MATERIAL.						KINDS OF FISH.						Number.	
		Vessels.		Boats.		Gill-Nets.		Trap-Nets.		Weirs.		Scines.		Herring, salted, brls.	Herring, fresh or frozen, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved, lbs.		Lobsters, preserved in cans, lbs.
		No.	Value.	Men.	Value.	Fathoms.	Value.	No.	Value.	No.	Value.	Fathoms.	Value.						
<i>Inverness County.</i>																			
1	Port Hood			73	1460	160	9000	3600	1	800				200	240	20000	800	50620	1
2	Little Mabou			28	280	40	1200	400							100	4000	40	2	3
3	Seaside			15	220	30	2400	800							200	6000	60	36472	4
4	Little Judique			35	420	70	3000	1000						300	200	80000	120	4	
5	Judique			20	240	40	1200	400						3000	150	10000	40	31361	5
6	Long Point			26	360	45	1800	600						4500	260	28000	180	3450	6
7	Craigish			16	160	24	2100	900							60	2000	70	7	1
8	Low Point			22	220	40	2200	750							120	600	60	8	2
9	Port Hastings	1	35 000	3	350	40	1500	500							600	20000	32	7101	9
10	Port Hawkesbury	2	115 400	16	20	300	30	4800	1440			2	500 000		700	20000	596	2676	10
11	West Bay	1	54 000	12	10	150	20	1800	960						400			11	12
12	Lime Hill			28	420	56	1680	800							448			13	13
13	Marble Mountain			14	210	28	1120	560							1184			14	14
14	Malagawatch			37	555	74	2960	1480							140			15	15
15	South side River Dennis			14	210	28	1170	585							60			16	16
16	Orangedale			13	195	26	750	375							35			17	17
17	Boom			9	135	18	420	210							20			18	18
18	Seal Cove			5	75	10	300	150							20			19	19
19	Estuere			16	240	32	1080	540							30			20	20
20	South side Whycoomagh			14	210	28	1260	610						225 920	11		2	9600	21
21	Mabon Harbour			5	120	12	250	125						200	9			5280	22
22	Coal Mines			8	150	17	260	130							16		9	7680	23
23	Sight Point			5	100	11	300	150							15		16	24	24
24	Port Ban			7	140	14	350	160							20		30	25	25
25	Broad Cove			5	100	12	420	200							10			26	26
26	Whycoomagh			7	100	14	250	120						1000				27	27
27	East Lake																	28	28
28	Loch Ban and Outlet			7	235	17	438	106							10		25	6960	29
29	Delaney's Cove			6	214	18	552	146						560	14		36	30	30
30	Doucet's Cove																		

31 Belle Cote.....	1	26	600	5	28	1390	96	4326	2375	.....	.....	.....	6	12530	53	129	31		
32 W. side Margaree Harbour.....					6	235	16	1895	689	.....	.....	.....		32792	13	11	32		
33 Margaree River.....										73	510	.....		530	.....	.....	33		
34 Margaree Forks.....										.....	.....	.....		490	.....	.....	34
35 Margaree Island.....					16	432	32	1432	384	.....	.....	.....			80	193	35		
36 Broad Cove Marsh.....					13	351	26	1020	273	.....	.....	.....			50	238	36		
37 Broad Cove Shore.....					10	200	20	985	296	.....	.....	.....			10	20	37		
38 Coal Mines and Whale Cove.....					5	100	10	346	152	.....	.....	.....			.....	.....	38
39 Lake Outlet and Loch Bain.....					4	40	8	410	120	.....	.....	.....			.....	.....	39
40 Trout Brook and East Lake.....										.....	.....	.....			.....	.....	40
41 Eastern Harbour.....	7	85	1200	35	88	5150	291	6200	4000	1	25	50	.....	7655	360	760	41				
42 Cheticamp Point.....					45	2160	178	5200	2800	2	280	560	8	1600	660	122	42					
43 Cape Rouge.....					18	600	54	800	600	.....	.....	.....		2000	60	400	43		
44 Grand Etang.....					15	600	48	650	300	.....	.....	.....		3600	290	680	44		
45 Friar's Head.....					20	750	60	760	400	.....	.....	.....		5500	230	110	45		
46 Doucett's Cove.....					4	200	12	100	80	.....	.....	.....		60	160	9600	46		
47 Pleasant Bay.....					25	800	60	100	80		1440	425	22944	47				
Totals.....	12	315	7800	71	785	20577	1865	68784	30346	1	800	73	510	5	805	1610	18	96882	2360	5324	2600	284312
Value.....										298	74536	312	39804	2382	74536	312	39804

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.										FISH PRODUCTS.						Total Value.	Number.					
		Cod, dried, cwt.	Cod, tongues and Scales, brls.	Hake, dried, cwt.	Hake, sounds, lbs.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bas, lbs.	Alewives, brls.	Oysters, brls.	Eels, brls.	Squid, brls.	Dogfish, lbs.	Coarse and mixed fish, brls.			Fish Oils, galls.	Seal skins, No.	Fish used as bait, brls.	Fish used as ma- nure, brls.	Fish Guano, tons.
1	Port Hood	1400		700	600	450	10	400	400	1000	200			25	300	3000		1400	350	30		33,523 80	1	
2	Little Mabou	400		400		60		100	30	500		20		40		1000		50	50			3,603 00	2	
3	Seaside	120		200	100	50			70	200	100	10		30		1200		20	60	20		8,592 08	3	
4	Little Judique	200		80	60	40				1200	100	10		40	40	600		20	40	40		5,703 00	4	
5	Judique	60				20		1200		300		15		15	10	600		20	25	10		6,472 04	5	
6	Long Point	90				30		1200		500		15			10	400		20	30	30		5,948 50	6	
7	Creignish	100				20						15				400		40	20	20		2,812 50	7	
8	Low Point	160		40		40		200		3000	30	20		50		600		20	25	50		2,389 00	8	
9	Port Hastings	150		150		50		500	2000	4000	50			50	20			30	50	20		6,109 14	9	
10	Port Hawkesbury	250				50		500		2000				20				800	200	200		14,993 64	10	
11	West Bay	57	2							2000				45	20			10	12	10		685 00	11	
12	Lime Hill	150	6					860	2000	2000								50	7	6		3,215 50	12	
13	Marble Mountain	100	4					1400	4000	4000			200	100				100	12	12		8,528 50	13	
14	Malagawatch	245	10					1200	800	3000			20	15				30	8	8		1,391 50	14	
15	South side River Dennis	75	3					1000	1000	3000			500	100				15	4	4		3,277 00	15	
16	Orangedale	50	2					800	800	600			20	30				5	3	3		789 00	16	
17	Boon	30	1					600	600	600			50	25				3	3	3		653 20	17	
18	Seal Cove	15						1200	1800	1500			110	30				12	6	6		1,188 80	18	
19	Estmere	40	2					1200	1200	1500			100	28				5	8	8		946 50	19	
20	South side Whyocomagh	15		10		12		250	80	2100			8					30	40	40		2,291 50	20	
21	Mabon Harbour	40		5		15		200	60	2500			8	10				25	25	22		1,561 70	21	
22	Coal Mines	95		4		10		100	100	7		3						60	15	15		645 00	22	
23	Sight Point	70		4		4			45	1000								45	35	35		1,865 20	23	
24	Port Bain	65		4		10			40	3000								12	40	10		1,001 50	24	
25	Broad Cove	45		4		20		800		2200		15		40	10			35	15	15		1,150 00	25	
26	Whyocomagh	90						9000														950 00	26	
27	East Lake							500						5								200 00	27	
28	Loch Bain and Outlet													15				295	54			2,800 40	28	
29	Delaney's Cove	218		25					100						4			320	30			2,736 50	29	
30	Doucet's Cove	351		31				225							6									30

31 Belle Côte	2483	28	100	208	...	800	150	...	247	16	20	90400	...	2130	...	140	...	20,094 50 31
32 West side Margaree Harbour...	1520	85	420	157	...	650	2010	...	120	5	6	11600	...	975	...	125	...	20,392 15 32
33 Margaree River .....	...	...	...	...	...	1200	...	...	831	4	...	...	...	...	...	...	...	4,005 50 33
34 Margaree Forks .....	...	...	...	...	...	500	...	...	740	...	...	...	...	...	...	...	...	3,478 00 34
35 Margaree Island	150	19	...	39	...	...	380	...	...	...	30	40300	...	740	...	85	...	5,385 40 35
36 Broad Cove Marsh	114	28	...	28	...	...	...	...	...	...	8	31000	...	490	...	116	...	5,973 95 36
37 Broad Cove Shore	69	...	...	18	...	...	...	...	...	...	3	8900	...	200	...	20	...	909 50 37
38 Coal Mines and Whale Cove	25	...	...	7	...	...	...	...	...	...	...	500	...	45	...	113	...	2,657 40 38
39 Lake Outlet and Loch Bain .....	...	...	...	...	...	700	...	...	140	29	...	...	...	...	...	...	...	2,990 00 39
40 Trout Brook and East Lake .....	...	...	...	...	...	10200	...	...	15	...	500	...	...	5230	...	66	...	1,087 50 40
41 Eastern Harbour	13640	75	...	90	...	...	...	...	...	...	...	...	...	2800	...	40	...	82,542 25 41
42 Cheticamp Point	3800	60	...	180	...	...	...	...	...	...	...	...	...	...	...	...	...	24,206 00 42
43 Cape Rouge	20	...	...	20	...	...	...	...	...	...	80	...	...	40	...	13	...	8,982 65 43
44 Grand Etang	2080	30	100	10	...	...	...	...	...	...	120	...	...	880	...	5	...	25,737 37 44
45 Friar's Head	900	50	...	20	...	...	...	...	...	...	100	...	...	300	...	...	...	8,801 00 45
46 Doucet's Cove	120	...	...	...	...	...	...	...	...	...	50	...	...	60	...	...	...	3,668 00 46
47 Pleasant Bay	100	...	...	...	...	...	...	...	...	...	...	...	...	50	...	...	...	9,848 16 47
Totals	29702	30	1394	1420	1700	10	38160	5690	2292	1050	645	1397	22000	39	17475	124	1742	80
Value	\$133659	300	4182	710	5950	30	3816	569	10314	3150	6450	5588	2200	117	6990	155	2613	40
																		357,753 83

RETURN showing the Number and Value of Vessels and Boats engaged in

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.				KINDS			
		Vessels.			Boats.			Gill Nets.		SALMON.		MACKEREL.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Salted, lbs.	Fresh in ice, lbs.	Herring, salted, brls.	Salted, brls.	Fresh or pre-served (in cans), lbs.
<i>Richmond County.</i>				\$			\$			\$					
1	Arichat.....	10	268	5360	40	66	792	54	10725	4290	900	408	118	1080	
2	Petite de Grat.....	4	98	1960	21	116	1392	147	26550	10620		2215	348		
3	Cape Hoquet.....					75	780	85	10500	4200		730	132		
4	West Arichat.....	4	132	2640	13	191	1290	106	21625	8650		822	128		
5	Rocky Bay.....					45	540	65	12600	4640		497	92		
6	D'Escousse.....	7	230	4600	55	54	648	14	2960	1480		280	535		
7	Lower D'Escousse.....	10	468	9360	119	129	1548	37	4760	2380		288	187		
8	St. Peter's.....	2	50	600	9	16	250	20	3200	800		50	12		
9	River Bourgeois.....	21	514	9500	150	18	125	21	3000	1100		360			
10	Grandigue and Port St. Lewis.....					21	400	42	5600	1750		250	50		
11	River Inhabitants and Basin.....	4	131	1300	17	94	1000	129	25700	6500		1200	250		
12	Port Malcolm and Gut of Canso.....	4	146	2350	20	63	630	88	8000	3000		725	175		
13	West Bay.....					90	900	180	5000	2000	10	400			
14	Grand River.....					26	780	53	9360	1872		1500	182	240	
15	Point Michéau.....					21	400	43	6300	1260			105	135	
16	Lower L'Ardoise.....	1	11	200	2	67	1300	120	13000	2600		2122	450	400	
17	L'Ardoise.....	1	11	150	3	73	2000	150	13140	2628			800	480	
18	Rockdale.....					34	680	75	6800	1350			480	200	
19	Grande Grève.....					15	300	28	3000	600			90	60	
20	St. Peter's.....					13	200	26	2800	560			74	50	
31	L'Archevêque.....					13	260	28	3800	760			30	100	
22	Framboise.....					14	350	33	1500	300			50	130	
23	Fourchu.....					21	800	60	3000	600			100	120	
24	Indian Reserve.....					8	300	21							
	Totals.....	68	2059	38020	449	1283	17665	1625	202920	63950	10	4522	10586	3942	1080
	Value.....	\$									160	904	47637	55188	129

the Fisheries, Fishing Materials, and the Kinds, &c.—Nova Scotia—Con.

OF FISH.														FISH PRO- DUCTS.		TOTAL VALUE.	Number.
LOBSTER.		COD.		Haddock, cwt.	Pollock, cwt.	Halibut, lbs.	Smelts, lbs.	Alewives, brls.	Clams, brls.	Eels, brls.	Squid, brls.	Flounders, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish used as bait, Brls.		
Preserved in cans, lbs.	Alive or fresh, tons.	Dried, cwt.	Tongues and sounds, brls.													\$ cts.	
9600	39	945	30	174	60			1	27		30			464		12,305 20	1
82416		1620		764	200				5	25	24			73		37,346 94	2
33456		804		695	60			1								16,051 84	3
58696		965		267	22			158	4	1	7			150		19,884 44	4
		272		103	12			9								5,185 50	5
		1787		35			801	17	24		7	3500		527		17,588 35	6
72000		4780		137	2	1500	250		167		24	13800	20	2310		38,924 00	7
		570	3							5				200	20	3,148 00	8
24290		8200		200						10				3000	100	44,070 60	9
		100					14000	25		100				75		4,117 50	10
		5400		250			2900	750		15				450	20	37,955 00	11
7200		3200		100				410						600	55	23,638 00	12
		500		10				10		10				160	10	4,434 00	13
		180		10				14		10				90	25	5,560 50	14
		150		45	6			10						75	30	3,333 00	15
		960		500	25			25		10				480	150	14,823 90	16
33600		1400		800	30			128		8				700	150	25,375 00	17
33688		400		150	10			120						200	100	12,801 32	18
		80		50	8			15		6				40	60	2,037 50	19
		60		60	10			20						30	50	1,720 00	20
40000		70		10	5			10		14				35	100	7,849 00	21
		75						18		12				37	40	2,658 30	22
128600		1000		400	10			20						1500	200	27,054 00	23
		260		50	32			10		20				130	20	1,768 00	24
523546	39	33778	3 30	4800	492	1500	17951	1771	227	246	92	17300	20	11326	1130		
73295	1560	152001	30 90	16800	1476	150	897	7969	1362	2460	368	865	60	4530	1695	369,629.89	

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia.—*Con.*

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.				KINDS OF FISH.										Number.	
		Vessels.			Boats.			Gill-Nets.		Trap-Nets.		Salmon, salted, in ice, lbs.	Salmon, fresh, in cans, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved (in cans), lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, brls.			
		No.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.												
Victoria County.																							
1	Meat Cove.				12	240	28	594	297						25	24					360		1
2	Wreck Cove.				12	240	27	818	409			5			23	15					320		2
3	Burton's Beach.				5	100	11	324	162			1			15	10					200		3
4	Bay St. Lawrence Pond				35	700	79	1540	770			18			30	70					1050		4
5	North Harbour.				55	1100	80	3640	1820			22			10	280					800		5
6	Middle Harbour Head.				4	80	6	704	352			6			1	24					40		6
7	Black Head.				2	30	2	220	110			7		900	12	168		2440			10		7
8	White Point.				56	1120	100	3360	1680			27			40	21		13776		2440	2450		8
9	New Haven.				36	1440	68	2276	1138					484	20	15		6864			3070		9
10	Neil's Harbour.				40	1600	70	3080	1540			14		48	70	30		1920			1000		10
11	Green Cove.				20	400	40	1320	660						15	80		2248			3900		11
12	North Bay, Ingonish				140	2800	180	3880	1552			26											12
13	Big Bras d'Or, New Campbellton and Bird Island.				30	300	40	1300	450			3			150	10		1920			150		13
14	Englishtown and St. Ann's.	1	26	200	3	400	80	1000	1000	2	800	40		500	200	80					250		14
15	North Shore.				55	550	90	1500	1000			10			100	100		14400			600		15
16	South Ingonish				65	1050	130	4500	2900	1	500	30		300	60	200		38200			2500		16
17	Nyanza.				22	220	23	1148	358						21	300		412			74		17
18	Baddeck and Plaster.				27	270	27	350	145				107		56	500		1460			151		18
19	Boularderie and Kempt Head				55	528	106	2676	740			2925			40	700		430			196		19
20	Grand Narrows				33	277	43	1017	290						397	1200		2010			1560		20
21	Washabuck and Gillis Point.	1	22	200	3	349	37	1080	210			1208			123	2000		1010		2600	209		21
22	Little Narrows.				15	120	15	430	120			210			98	300		620			184		22
Totals.		2	48	400	6	795	13914	1282	36757	17703	3	1300	209	4450	2232	1506	5000	5942	84328	21514	5		
Value.												3340	890	335	6777	63	16394	713	11806	96813	50		

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Con.

Number.	DISTRICTS.	KINDS OF FISH.										FISH PRODUCTS.			TOTAL VALUE.	Number.	
		Hake, dried, cwt.	Hake, sounds, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alwives, brls.	Oysters, brls.	Eels, brls.	Squid, brls.	Tom cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oils, galls.			Seal-skins, No.	Fish used as bait, brls.
Victoria County.																	
1	Meat Cove.....			12								16	180	20	36	1	
2	Wreck Cove.....			8								14	160	7	28	2	
3	Burton's Beach.....			5								5	100	15	15	3	
4	Bay St. Lawrence Pond.....			40								30	525	32	90	4	
5	North Harbour.....			30	1800	1500	1000			10		40	400	7	120	5	
6	Middle Harbour Head.....			2									20	3	8	6	
7	Black Head.....												5	6	2	7	
8	White Point.....			90		1000							1220	35	168	8	
9	New Haven.....			150								50	1225	40	280	9	
10	Nell's Harbour.....			140								30	1540	15	240	10	
11	Green Cove.....			50								15	505	19	100	11	
12	North Bay, Ingonish.....			430								60	2500	130	250	12	
13	Big Bras d'Or, New Campbellton and Bird Island.....		10	30		400	600				5	20	200		50	13	
14	Englishtown and St. Ann's.....		150	100		1000	1000		30	30	50	20	200		50	14	
15	North Shore.....		50	50		1000	300				5	40	40		100	15	
16	South Ingonish.....			140		500				15	50	80	80	20	100	16	
17	Nyanza.....				2200		1500		65	9	31	725	3		2	17	
18	Baddeck and Plaster.....				1506		1150		22	58	11	720	4	18	14	18	
19	Boularderie and Kempt Head.....			10	150		800		10	5	10	450	4	12	13	19	
20	Grand Narrows.....				518		1080		46	1273	76	1300	15	686	85	20	
21	Washabuck and Gillis Point.....			21	750		2600		30	80	26	800	6	46	45	21	
22	Little Narrows.....				650		750		58	198	21	900	4	30	25	22	
	Totals.....	343	160	1237	7574	5400	10780	261	1653	230	170	4895	488	9692	349	1821	
	Value.....	\$1029	80	4829	757	540	539	1174	4659	2300	680	245	1464	3877	436	2731	162,325 96

RECAPITULATION

OF the Yield and Value of the Fisheries of the Island of Cape Breton for the Year 1893.

Kinds of Fish.	Quantities.	Rate.		Value.	
		\$	cts.	\$	cts.
Salmon, pickled.....	Brls. 254	16	00	4,064	00
do fresh.....	Lbs. 120,281	0	20	24,056	20
do preserved.....	" 4,592	0	15	688	80
Herring, pickled.....	Brls. 22,017	4	50	99,076	50
do fresh and frozen.....	Lbs. 227,000	0	01½	2,837	50
Mackerel, pickled.....	Brls. 12,509	14	00	175,126	00
do preserved.....	Lbs. 11,622	0	12	1,394	64
Lobsters, preserved.....	" 1,211,970	0	14	169,675	80
do fresh.....	Tons. 39	40	00	1,560	00
Cod, dried.....	Cwt. 98,871	4	50	444,919	50
Cod tongues and sounds.....	Brls. 38	10	00	380	00
Hake, dried.....	Cwt. 1,788	3	00	5,364	00
do sounds.....	Lbs. 1,580	0	50	790	00
Haddock, dried.....	Cwt. 10,179	3	50	35,626	50
Pollock, dried.....	" 956	3	00	2,868	00
Trout, fresh.....	Lbs. 52,359	0	10	5,235	90
Halibut, fresh.....	" 26,880	0	10	2,688	00
Smelts, fresh.....	" 81,781	0	05	4,089	05
Bass, fresh.....	" 200	0	06	12	00
Alewives.....	Brls. 5,071	4	50	22,819	50
Oysters.....	" 2,734	3	00	8,202	00
Clams.....	" 227	6	00	1,362	00
Eels.....	" 1,386	10	00	13,860	00
Shad.....	" 8	10	00	80	00
Squid.....	" 1,816	4	00	7,264	00
Flounders.....	Lbs. 17,300	0	05	865	00
Tom cods.....	" 5,495	0	05	274	75
Coarse and mixed fish.....	Brls. 555	3	00	1,665	00
Fish oils.....	Galls. 46,730	0	40	18,692	00
Fish as bait.....	Brls. 7,473	1	50	11,209	50
Fish used as manure.....	" 155	0	50	77	50
Fish guano.....	Tons. 803¼	25	00	2,018	75
Seal skins.....	No. 1,098	1	25	1,372	50
Dogfish.....	Lbs. 220,000	0	01	2,200	00
Total.....				1,072,414	89
Total for 1892.....				1,047,042	35
Increase.....				25,372	54

TABLE showing the Number and Value of Vessels and Boats, Nets, Seines, &c., engaged in the Fisheries of the Island of Cape Breton, and the approximate Estimate of the Value of other material not included in the Statistical Returns for 1893.

Materials.	Value.
	\$ cts.
90 Vessels, 2,541 tons.....	48,470 00
3,709 Boats.....	72,525 00
385,653 Fathoms of nets.....	146,999 00
54 Canning establishments.....	42,775 00
87,062 Lobster traps.....	78,900 00
Hand lines, trawls, &c.....	30,000 00
Fishing piers, houses and other sundries.....	77,842 00
Steamers, smacks, dories, canoes, &c.....	10,600 00
35 Smelt nets.....	3,550 00
Fish traps and weirs.....	2,610 00
6 Seines.....	2,810 00
Total.....	517,081 00

NOVA SCOTIA

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in and the Total Number of Men employed, &c., in the

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.							FISHING MATERIAL.					Salmon, fresh, in ice, lbs.	Herring, salted, brls.	Herring, smoked, lbs.
		Vessels.				Boats.			Gill-Nets.		Weirs.					
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Number.	Value.				
	<i>Antigonish County.</i>			\$			\$			\$		\$				
1	Harbour Boucher, Linwood and Tracadie	1	10	100	3	63	924	79	188700	1690	.....	.....	700	700	.....
2	Bayfield, Monk's Head and south side Antigonish Harbour					42	1012	53	11950	1890	.....	.....	13000	102	.....
3	Morristown and Lakeville					27	388	38	11710	1369	1	10	10250	213	.....
4	Ballentyne's Cove and Cape George					25	497	40	11750	1152	.....	.....	6000	206	.....
5	North Cape and Georgeville					25	350	41	8800	609	.....	.....	.....	121	.....
6	Malignant Cove, Doctor Brook, Arisaig, Moidart and Knoidart					40	574	54	12980	1526	.....	.....	11400	170	.....
	Totals	1	10	100	3	222	3745	305	245890	8236	1	10	41350	1512	.....
	Value	\$											8270	6804	.....
	<i>Colchester County.</i>															
1	Sterling					17	220	19	520	220	.....	.....	.....	.....	.....
2	Stewiacke					35	210	54	405	281	.....	.....	3900	.....	.....
3	Five Islands					8	220	16	400	34	.....	.....	1400	.....	.....
4	Economy					8	240	16	2675	565	7	4850	11695	.....	12000	
5	Little Bass River to Highland Village					12	350	27	3200	505	7	1225	14952	.....	.....
6	Grand Village to Queen's Village					17	570	34	5625	760	.....	.....	29205	.....	.....
	Totals					97	1810	166	12825	2365	14	6075	61152	.....	12000	
	Value	\$											12230	.....	240	

DISTRICT No. 2.

the Fisheries, Quantity and Value of Fishing Material, Kinds and Quantities of Fish, Province of Nova Scotia for the Year 1893.

KINDS OF FISH.															FISH PRODUCTS.			VALUE.	Number.
Mackerel, salted, brls.	Mackerel, fresh or preserved, in cans, lbs.	Lobsters in cans, lbs.	Cod, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bass, lbs.	Alewives, barrels	Oysters, barrels.	Eels, barrels.	Shad, barrels.	Fish oils, galls.	Fish used as bait, brls.	Fish used as manure, barrels.		
226	75456	188	....	9	22	1000	....	1630	....	46	165	15	....	99	307	75	19,495	1
69	19200	19500	10	....	....	....	700	....	900	....	....	31	116	....	5	74	20	10,595	2
58	29000	52	41	116	5	....	....	135	1295	27	....	10	....	68	129	30	8,855	3
76	37500	143	310	893	7	....	....	....	....	49	....	....	....	420	210	38	11,209	4
75	10000	241	646	2239	38	....	....	....	....	4	....	....	....	1027	239	10	8,060	5
87	54000	83	278	332	5	800	....	480	500	6	....	....	....	362	117	55	13,722	6
591	19200	225456	712	1275	3589	77	2500	....	3145	1795	132	196	141	...	1981	1076	228		
8274	2304	31564	3204	3825	1795	270	250	....	157	107	594	588	1410	...	792	1614	114	71,936	
....	32230	....	....	....	....	....	....	14000	....	....	....	....	....	....	90	....	5,347	1
....	190	....	....	....	3200	....	....	1000	65	....	....	44	....	....	....	1,893	2
....	2950	....	....	....	....	....	3	180	24	....	1,568	3
....	49	....	....	....	3,069	4
....	69	....	....	....	3,680	5
....	105	....	....	....	6,891	6
....	32230	190	....	....	....	3200	2950	14000	1000	65	....	....	270	180	114	...		
....	4512	855	....	....	....	320	295	700	60	293	...	....	2700	72	171	....	22,448	

in the Fisheries, Quantity and Value of Fishing Material, &c.—Nova Scotia—Con.

KINDS OF FISH.												FISH PRODUCTS.		TOTAL VALUE.	No.
Mackerel, fresh or preserved, in cans, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Hake, dried, cwt.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Smelts, lbs.	Alewives, barrels.	Oysters, barrels.	Eels, barrels.	Shad, barrels.	Fish used as bait, barrels.	Fish used as Manure, barrels.		
400	479,365						45,900	10	50			990		71,134 00	1
						1,000	20,000	300	300					3,250 00	2
							1,000	528		25		11		3,966 00	3
							4,760	164				63		1,770 00	4
							2,000	23				170		2,003 00	5
							2,200							1,039 00	6
		81	23	10	5		350							765 00	7
		73		29	44		1,500							1,585 00	8
		91		57	30		1,200							864 00	9
		30		5	8										
400	479,365	275	23	101	87	1,000	78,910	1,025	1,050	25	244	990	. . .		
48	67,111	1,238	69	354	261	100	3,946	4,612	350	250	2,440	1,485	.....	86,376 00	

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, Fishing Material, &c.—Nova Scotia—*Con.*

DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING MATERIAL.				KINDS OF FISH.										
Number.	Vessels			Boats.			Gill-Nets.		Trap-Nets.		Seines.		Salmon, salted, brls.	Salmon, fresh in ice, lbs.	Salmon, preserved in Cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Mackerel, salted, brls.	Mackerel, Fresh or preserved (in cans), lbs.	Lobsters, preserved in cans, lbs.		
	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.	Fathoms.	No.	Value.										
Guysborough County.																						
1	Ecum Secum			62	800	78	1000	500		1	80	70		1250		140		70	4	28500	1	
2	Marie Joseph			50	1200	69	1900	1300		1	40	30		440				45	8	49850	2	
3	Liscombe and Spanish Bay.			92	2000	110	2800	1600		2	150	70		700		50		15	15	83960	3	
4	Gegoggin Harbour and River.			27	400	35	1200	900						800		120		88	9	1200	4	
5	St. Mary's Bay and River.			49	550	65	2800	1000						6200		250		380	8	38680	5	
6	Wine Harbour	1	17	300	6	25	390	40	2400	630	2	150	60		650		400		270	14	9650	6
7	Port Hilford			42	700	60	2500	900	1	450	1	60	30		500		120		210	5	40200	7
8	Holland's Harbour			15	900	24	1840	650						1000		600		315	10	70500	8	
9	Beckerton			50	1900	70	3600	1100			1	75	40		200		9		300			
10	Fisherman's Harbour.			56	1800	80	4500	2000										360	50	400	10	
11	Country Harbour and Isaac's Harbour			92	1540	115	3380	1050			2	450	200		2500		160		380	40	68400	11
12	From Isaac's Harbour to New Harbour			180	5365	192	17731	3894			1	90	25	4				1800	122	123474	12	
13	New Harbour to Whitehead.			298	10185	480	56121	11708	3	450	4	550	450	8			432	4988	1616	304614	13	
14	Whitehead to Canso, including Little.	1	15	300	5	212	9900	8000	30	7500	41200	950		5000				1200	300	120000	14	
15	Canso to Salmon River.			284	3594	286	39840	9275	40	4785	5	490	825	4000				1080	500	200000	15	
16	Salmon River to County Line, including Cook's Cove, Guysboro, North Shore and Strait of Canso.	7	244	3250	29	453	9159	500	77420	15075		6	1100	660		13150		6975	948	379000	16	
Totals		13	372	5500	59	1987	50383	2479	251032	60182	74	13185	30	4435	3410	12	36890	1112	18531	3649	699500	1136476
Value.																192	7398	167	83391	51086	83940	159105

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, Fishing Material, &c.—Nova Scotia.—*Con.*

Number.	DISTRICTS.	KINDS OF FISH.												FISH PRODUCTS.			TOTAL VALUE.	Number.			
		Cod, dried, cwt.	Hake, dried, cwt.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alewives, brls.	Clams, brls.	Eels, brls.	Shad, brls.	Squid, brls.	Flounders, lbs.	Tom Cod or Frost Fish, lbs.	Coarse and Mixed Fish, brls.			Fish Oils, galls.	Fish used as Bait, brls.	Fish used as Manure, brls.
<i>(Guysborough County.)</i>																					
1	Ecum Secum	95	10	75	15	2200	350	460	15	60	.....	12	400	.....	.....	.....	50	390	120	6,203 00	1
2	Marie Joseph	360	25	25	10	490	700	700	.....	90	25	16	200	460	.....	.....	280	460	250	11,183 00	2
3	Liscombe and Spanish Bay	1370	.....	120	40	1400	2100	2800	96	210	30	15	450	.....	.....	.....	750	820	400	23,717 00	3
4	Gegoggin Harbour and River	120	5	20	5	1200	700	900	10	15	8	5	160	200	.....	.....	65	180	10	2,437 00	4
5	St. Mary's Bay and River	400	20	60	10	6800	1500	3000	48	26	600	5	100	150	.....	.....	200	460	200	19,174 00	5
6	Wine Harbour	75	40	20	20	800	900	1200	12	15	13	10	500	100	.....	.....	40	260	50	4,464 00	6
7	Port Hilford	150	15	20	6	700	550	1000	15	30	9	10	400	280	.....	.....	80	360	120	8,888 00	7
8	Holland's Harbour	150	.....	25	7	7000	400	300	5	28	6	13	250	125	.....	.....	75	215	.....	3,998 00	8
9	Beckerton	350	.....	20	.....	500	500	900	10	40	16	20	610	175	.....	.....	200	200	180	14,855 00	9
10	Fisherman's Harbour	435	25	10	5	700	410	1200	5	40	20	18	800	260	.....	.....	270	280	20	5,836 00	10
11	Country Harbour and Isaac's Harbour	460	80	25	8	5500	300	1400	20	60	15	20	947	200	.....	.....	260	360	150	16,982 00	11
12	From Isaac's Harbour to New Harbour	960	5	204	252	1700	4010	3100	29	.....	21	25	.....	300	233	.....	1881	736	100	36,781 00	12
13	New Harbour to Whitehead	6875	30	1300	160	4500	6520	2200	600	.....	190	300	133	500	623	.....	7708	1600	315	137,513 00	13
14	Whitehead to Canso, including Title	3600	.....	1250	80	300	2000	.....	100	.....	60	2250	.....	.....	334	.....	3740	1360	700	96,515 00	14
15	Canso to Salmon River	2800	45	788	40	1900	.....	3000	50	.....	10	4000	.....	.....	483	.....	3895	1200	200	81,333 00	15
16	Salmon River to County Line, including Cook's Cove, Guysboro, North Shore and Strait of Canso.	3080	65	842	25	2300	.....	11390	510	.....	40	1200	.....	.....	820	.....	5602	1100	60	123,292 00	16
Totals		21280	325	4914	683	37000	20730	33550	1525	614	483	7934	4950	2750	2493	.....	25096	9981	2875		
Value		\$ 95760	975	17200	2049	3700	2073	1677	6864	4298	4830	31736	245	137	3740	.....	10038	14972	1438		593,141 00

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING MATERIAL.				KINDS OF FISH.										
Number.	Vessels.			Boats.			Gill-Nets.		Trap-Nets.		Seines.		Salmon, fresh, in ice, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved, in cans, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, alive or fresh, tons.	Number.	
	No.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.	Fathoms.										Value.
Halifax County.																						
1	North Shore.....	2	38	350	6	151	1880	12000	1850	3	300	60	6000	5800	3500	63	.....	770	.....	.....	11	1
2	East St. Margaret's.....	2	62	1550	20	216	2250	135	12500	2000	6	600	38	3600	4800	120	.....	350	.....	.....	2	2
3	Indian Harbour.....	1	10	180	3	49	980	4600	4850	5	900	29	2875	4200	3200	2140	6000	608	6500	.....	3	3
4	Peggy's Cove.....	1	10	180	3	49	980	4600	4850	5	900	29	2875	4200	3200	2140	6000	608	6500	.....	4	4
5	Dover.....	6	116	1950	25	190	2350	154	28700	4020	.....	50	5000	1600	1820	463	3000	270	1200	.....	5	5
6	Prospect.....	2	40	600	11	170	1750	200	18000	2500	.....	45	4500	9000	2220	660	30000	480	5000	.....	6	6
7	Terence Bay.....	5	87	1500	17	222	3000	236	10030	1580	.....	34	3500	8000	1800	800	30000	1200	5000	.....	7	7
8	Pennant.....	5	70	2000	18	60	3000	125	4200	850	.....	12	1200	6500	600	480	10000	15	8	.....	8	8
9	Sambro.....	1	30	1000	6	70	1500	125	8000	1500	.....	8	600	1400	350	50	100	1000	80	.....	9	9
10	Ketch Harbour.....	2	35	1300	8	85	1300	135	8500	2100	.....	16	1600	3000	400	70	250	15000	.....	.....	10	10
11	Portuguese Cove.....	8	231	8000	50	66	660	35	2400	600	.....	20	2500	6500	800	92	1900	250	.....	.....	11	11
12	Herring Cove.....	1	30	600	8	60	650	50	2600	400	.....	45	5000	10500	800	100	200	150	1000	.....	12	12
13	Ferguson's Cove.....	4	250	10000	60	15	300	25	400	100	.....	10	1200	3000	800	30	1	.....	.....	.....	13	13
14	Bedford.....	2	50	2300	14	74	1507	64	16815	968	.....	.....	.....	.....	290	262	.....	.....	.....	.....	14	14
15	Halifax.....	2	50	2300	14	74	1507	64	16815	968	.....	.....	.....	.....	290	262	.....	.....	.....	.....	15	15
16	Eastern Passage and Devil's Island.....	2	50	2300	14	74	1507	64	16815	968	.....	.....	.....	.....	290	262	.....	.....	.....	.....	16	16
17	Lawrencetown and Cow Bay.....	2	50	2300	14	74	1507	64	16815	968	.....	.....	.....	.....	290	262	.....	.....	.....	.....	17	17
18	Three Fathom Harbour and Seaforth.....	2	88	2400	29	48	464	11	5190	280	.....	.....	.....	.....	457	65	10	.....	.....	.....	18	18
19	West Chezetcook.....	11	450	13300	113	147	1525	49	31960	1854	.....	.....	.....	.....	85	456	88	.....	.....	.....	19	19
20	East Chezetcook.....	1	45	1800	12	38	507	21	6660	424	.....	.....	.....	.....	120	165	9	.....	.....	.....	20	20
21	Petpeswick Harbour.....	2	45	1100	7	52	1000	47	7070	444	.....	.....	.....	.....	177	177	5	.....	.....	.....	21	21
22	Musquodoboit Harbour.....	10	305	9675	35	130	1837	66	15000	1063	.....	.....	.....	.....	1700	188	40	.....	.....	.....	22	22
23	Jeddore.....	1	18	600	3	48	800	37	7010	540	.....	.....	.....	.....	140	300	50	.....	.....	.....	23	23
24	Clam Harbour and Owl's Head.....	2	264	425	7	51	950	59	9990	700	.....	.....	.....	.....	350	535	78	.....	.....	.....	24	24
25	Ship Harbour.....	1	23	600	6	13	415	16	2220	174	.....	.....	.....	.....	60	390	48	.....	.....	.....	25	25
26	Pleasant Harbour.....	1	39	18	7	36	790	42	7680	518	.....	.....	.....	.....	500	252	35	.....	.....	.....	26	26
27	Tanger.....	1	39	18	7	36	790	42	7680	518	.....	.....	.....	.....	500	252	35	.....	.....	.....	27	27

28	Pope's Harbour and Gerrard's Island	45	750	38	4980	806												205		9		49536	28
29	Spry Bay, Taylor's Head and Mushaboon	25	94	2400	88	9300	1860											409		240		101280	29
30	Sheet Harbour and Sober Island	2	53	1000	9	44	880	60	9900	1800			3	1600	190	300	480	350		146		86400	30
31	Beaver Harbour and Salmon River		40	720	63	2000	100						1	100	15			10		5		120320	31
32	Quoddy and Harrigan Cove		36	700	60	700	105									60		4		3		123840	32
33	Moser River and Smith's Cove		25	520	30	370	72	1	1000							190	150			10		93600	33
34	Mitchell's Bay and Ecum Secum		30	600	38	1200	240						1	400	100	162	190	10		2		93600	34
Totals		81	2292	65323	502	2605	42743	2777	330035	41225	15	2800	405	44031	72515	30212	1480	9827	40000	6606	28700	892096	131
Value																6042	296	44224	300	92484	3444	124898	5270

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

DISTRICTS.	KINDS OF FISH.										FISH PRODUCTS.				TOTAL VALUE.	Number.				
	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Hake, dried, cwt.	Hake, sounds, lbs.	Hadcock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alwives, brls.	Clams, brls.	Reis, brls.	Squid, brls.	Flounders, lbs.			Coarse and mixed fish, brls.	Fish Oils, galls.	Seal skins, No.	Fish used as bait, brls.
Halifax County.																				
1 North Shore.....	75	40	30	40	24	40	700	.....	200	17	6	6	3	1000	12	70	.....	6	.....
2 East St. Margaret's.....	80	50	25	50	375	30	150	.....	700	35	13	9	4	900	48	60	.....	170	.....
3 Indian Harbour.....	1245	1158	1860	115	170	65	40	300	200	10	2	1	1	500	20	1140	.....	30	.....
4 Peggy's Cove.....	605	1400	1000	290	300	105	800	2000	250	28	2	2	2	.....	24	954	.....	135	.....
5 Dover.....	900	900	460	500	70	80	.....	2000	100	35	20	3	5	12000	26	600	.....	70	.....
6 Prospect.....	1100	500	800	500	210	140	60	2000	100	60	5	4	3	15000	40	700	.....	90	.....
7 Terence Bay.....	2000	100	150	100	120	60	60	2500	100	20	3	1	1	5000	10	900	.....	80	.....
8 Pennant.....	850	60	90	60	70	150	200	200	4000	20	2	2	2	2000	10	120	.....	15	.....
9 Sambro.....	250	20	40	20	240	200	.....	.....	.....	.....	.....	.....	.....	.....	5	800	.....	200	.....
10 Ketch Harbour.....	1000	350	400	350	1000	20	.....	160000	.....	.....	.....	.....	.....	.....	5	90	.....	20	.....
11 Portuguese Cove.....	250	50	70	50	.....	10	.....	5000	.....	3	.....	3	.....	.....	5	10	.....	542	.....
12 Herring Cove.....	30	30	45	30	100	10	.....	.....	.....	16	18	4	4	.....	.....	1000	.....	400	.....
13 Ferguson's Cove.....	4500	63	127	63	210	160	.....	18351	.....	42	14	5	5	.....	.....	1359	.....	68	.....
14 Bedford.....	1627	3	.....	.....	6	131	350	780	.....	.....	.....	.....	.....	.....	.....	144	.....	6	.....
15 Halifax.....	130	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....
16 Eastern Passage and Devil's Island	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 Lawrencetown and Cow Bay.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 Three Fathom Harbour and Sea- forth.....	1060	.....	.....	.....	94	25	300	80	80	11	21	2	2	.....	.....	611	.....	48	.....
19 West Chezetcook.....	4974	3	.....	.....	373	64	.....	690	.....	140	300	6	6	.....	.....	2864	.....	200	.....
20 East Chezetcook.....	609	2	.....	.....	58	73	850	450	450	22	40	11	11	.....	.....	598	.....	30	.....
21 Petpeswick Harbour.....	618	.....	.....	.....	95	237	700	1200	1200	16	22	9	9	.....	.....	571	.....	33	.....
22 Musquodoboit Harbour.....	698	.....	.....	.....	70	62	1000	3290	6500	14	23	14	14	.....	.....	410	.....	26	.....
23 Jeddore.....	3590	2	90	160	125	119	200	9450	1200	9	25	16	16	.....	.....	2111	.....	290	.....
24 Clam Harbour and Owl's Head.....	514	7	14	35	37	1000	.....	1380	.....	6	30	5	5	.....	.....	387	.....	18	.....
25 Ship Harbour.....	616	200	400	200	42	17	.....	2415	.....	109	14	5	5	.....	.....	380	.....	18	.....
26 Pleasant Harbour.....	412	.....	.....	.....	75	34	250	3550	.....	5	10	.....	.....	.....	.....	297	.....	16	.....
27 Tangier.....	440	2	60	140	64	46	600	850	1000	10	10	4	4	.....	.....	480	.....	21	.....
28 Pope's Harbour and Gerrard's Island.....	300	3	3	.....	33	6	100	400	400	.....	6	1	1	.....	.....	253	.....	25	.....

29 Spy Bay, Taylor's Head and Mn haboon.....	1247	.....	356	400	58	6	.....	525	.....	15	6	5	.....	.....	943	.....	90	.....	27,255 00 29
30 Sheet Harbour and Sober Island..	500	.....	.....	.....	10	6	400	.....	10	5	4	.....	.....	.....	380	.....	30	.....	18,531 00 30
31 Beaver Harbour and Salmon River	90	.....	2	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	50	32	5	.....	17,459 00 31
32 Quoddy and Harrigan Cove.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	19	3	125	17,690 00 32
33 Moser River and Smith's Cove...	57	.....	.....	.....	.....	2	.....	.....	.....	.....	5	.....	.....	.....	20	.....	3	.....	1,179 00 33
34 Mitchell's Bay and Ecum Secum.	210	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	180	.....	4	90	14,347 00 34
Totals.....	30742	12	4934	6384	3924	2130	7900	220111	9450	686	610	130	12	37500	217	19057	51	2170	459	
Value.....\$	138341	120	14802	3194	13734	6390	790	22011	473	3088	4270	1300	48	1875	325	7621	64	3254	230	498,883 00

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in

Number.	DISTRICTS.	FISHING BOATS.			FISHING MATERIAL.				KINDS OF FISH.			
		No.	Value.	Men.	Gill Nets.		Weirs.		Salmon, fresh in ice, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.
					Fathoms.	Value.	No.	Value.				
	<i>Hants County.</i>		\$			\$		\$				
1	Maitland to Shubenacadie.....	36	402	36	2250	189			18600			
2	Shubenacadie to Grand Lake..	62	226	62	989	291			170			
3	Noel to Walton.....	8	265	8	2275	637	1	100	4485			
4	West Hants	11	465	16	2050	420	7	195	3950	55		1000
	Totals.....	117	1358	122	7564	1537	8	295	28205	55		1000
	Value.....\$								5641	248		20
	<i>Pictou County.</i>											
1	West Pictou.....	141	5045	142	3190	865			300			
2	Pictou Island.....	59	780	112	820	246				30		
3	Central Division.....	30	603	42	2515	1292			14700	50	76000	
4	Southern Division.....	11	165	20	764	853			10300			
5	Merigomish Island.....	4	60	7	800	900			5200			
6	North Beach.....	14	210	27	1350	2700			13200		12620	
7	Ponds.....	14	210	28	735	1420			6600	100		
8	Lismore.....											
	Totals.....	273	7073	378	10174	8276			50300	180	88620	
	Value.....\$								10060	810	665	

the Fisheries, and the Kinds and Quantities of Fish, &c.—Nova Scotia—Con.

KINDS OF FISH.														FISH PRO- DUCTS.		TOTAL VALUE.		Number.	
Mackerel, salted, brls.	Mackerel, fresh or preserved, (in cans), lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bass, lbs.	Alewives, brls.	Oysters, brls.	Eels, brls.	Shad, brls.	Coarse and mixed fish, brls.	Fish used as bait, brls.	Fish used as man- ure, brls.	\$	cts.		
.....	.....	.....	42	2	.....	.....	.....	228	365	.....	.....	.....	.....	.....	.....	.....	5,363	00	1
.....	.....	.....	152	9500	300	.....	.....	500	15	.....	.....	44	85	.....	.....	.....	1,214	00	2
.....	.....	.....	.....	.....	.....	.....	3500	1550	31	.....	.....	103	157	.....	.....	.....	2,041	00	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,396	00	4
.....	.....	.....	194	2	9500	300	3500	2278	528	.....	.....	232	157	.....	.....	.....	.....	.....	.....
.....	.....	.....	873	7	950	30	175	136	2378	.....	.....	2320	236	.....	.....	.....	13,014	00	.....
.....
5	800	386846 197620	.....	.....	350	1000	11200	.....	10	8	10	.....	.....	960	570	.....	56,707	00	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,360	00	2
.....	3250	29720	103	.....	500	.....	15000	400	150	200	125	.....	.....	.....	.....	.....	3,349	00	3
.....	.....	76386	.....	.....	.....	.....	4250	.....	.....	.....	.....	.....	.....	50	.....	.....	9,036	00	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	80	.....	.....	12,874	00	5
.....	.....	157968	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,040	00	6
.....	.....	17680	.....	.....	.....	.....	7236	.....	.....	.....	65	.....	.....	100	.....	.....	25,021	00	7
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	115	.....	.....	5,430	00	8
5	4050	866220	103	.....	1050	1000	37686	400	160	208	200	.....	10	1473	620	.....	.....	.....	.....
70	486	121270	464	.....	105	100	1884	24	720	624	2000	.....	15	2210	310	.....	141,817	00	.....

RECAPITULATION

OF the Yield and Value of the Fisheries in District No. 2, **Nova Scotia**, with
Comparative Statement of the Increase or Decrease for the Years 1892 and 1893.

Articles.	Quantities in 1893.	Rate.	Total.	Increase.	Decrease.
		\$ cts.	\$	Qty.	Qty.
Salmon, salted.....	Brls. 12	16 00	192 00	.....	93
do fresh.....	Lbs. 260,029	0 20	52,005 00	64,888	.....
do canned.....	" 1,112	0 15	167 00	402	.....
do smoked.....	" 2,140	0 20	428 00	915	.....
Herring, salted.....	Brls. 30,338	4 50	136,520 00	.....	13,097
do fresh.....	No. 128,620	per c. 0 75	965 00	.....	3,800
do smoked.....	Lbs. 13,000	0 02	260 00	.....	3,471
Mackerel, salted.....	Brls. 10,851	14 00	151,914 00	.....	.....
do canned.....	Lbs. 751,850	0 12	90,222 00	749,850	.....
Lobsters, canned.....	" 3,631,843	0 14	508,456 00	310,690	.....
do fresh.....	Tons. 131 $\frac{3}{4}$	40 00	5,270 00	.....	8 $\frac{1}{2}$
Cod, dried.....	Cwt. 53,496	4 50	240,732 00	.....	1,150
do tongues and sounds.....	Brls. 12	10 00	120 00	.....	379
Hake, dried.....	Cwt. 6,557	3 00	19,671 00	.....	1,359
do sounds.....	Lbs. 9,973	0 50	4,986 50	107	.....
Haddock.....	Cwt. 9,018	3 50	31,563 00	.....	1,046
Pollock.....	" 2,900	3 00	8,700 00	.....	154
Trout.....	Lbs. 62,150	10 00	6,215 00	.....	4,025
Halibut.....	" 245,091	10 00	24,509 00	83,197	.....
Smelts.....	" 180,241	0 05	9,012 00	25,823	.....
Bass.....	" 5,473	0 06	328 00	.....	7,797
Alewives.....	Brls. 4,121	4 50	18,544 00	554	.....
Oysters.....	" 754	3 00	2,262 00	.....	391
Clams.....	" 1,224	7 00	8,568 00	.....	.....
Eels.....	" 979	10 00	9,790 00	262	.....
Shad.....	" 1,346	10 00	13,460 00	.....	465
Squid.....	" 7,946	4 00	31,784 00	3,190	.....
Flounders.....	Lbs. 42,450	0 05	2,122 50	.....	.....
Tom cod.....	" 2,750	0 05	137 00	.....	.....
Coarse fish.....	" 2,877	1 50	4,315 00	.....	.....
Fish oils.....	Galls. 46,314	0 40	18,525 00	7,044	.....
Seal skins.....	No. 51	1 25	64 00	.....	.....
Fish used as bait.....	Brls. 15,804	1 50	23,706 00	2,441	.....
Fish products used as manure.....	" 4,182	0 50	2,092 00	2,278	.....
			1,427,605 00		

**COMPARATIVE Statement of Value of Fisheries in each County of District No. 2,
Nova Scotia, for the Years 1892 and 1893.**

County.	Value in 1892.	Value in 1893.	Increase.	Decrease.
Antigonish	83,546	71,936	.....	11,610
Colchester	20,835	22,448	1,613	
Cumberland	75,224	86,374	11,150	
Guysborough	587,876	593,143	5,267	
Halifax	433,358	498,883	65,525	
Hants	11,560	13,014	1,454	
Pictou	144,809	141,807	....	3,002
	1,357,208	1,427,605	85,009	14,612
		1,357,208	14,612	
Increase....		70,397	70,397	

TABLE showing the Value of Vessels, Boats, Nets, &c., engaged in the Fisheries of District No. 2, Nova Scotia, with an Approximate Value of other Fishing Material for the Year 1893, also showing the number of hands employed therein.

Articles.	Value.
	\$
95 vessels, 2,674 tons	70,923
5,473 boats	112,626
859,969 fathoms gill nets	123,195
89 trap nets	41,185
436 seines, 48,512 fathoms	75,975
23 weirs	6,380
79 smelt bagnets	1,404
Hand-lines, trawls and implements	19,320
165,434 lobster traps	86,666
	537,674
89 canneries	\$ 81,947
32 steamers and smacks	13,070
45 freezers and ice-houses	15,160
1,462 smoke and fish-houses	43,202
875 piers and wharves	22,273
	175,652
	713,326
Number of hands engaged on vessels	564
do do boats	6,442
do do packing, cleaning and curing fish	870
do employed in lobster canneries	1,796
	9,672

NOVA SCOTIA,

RETURN showing the Number and Value of Vessels and Boats engaged in the
Number of Men employed in the Fishing Industry

No.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.				Salmon, fresh in ice, lbs.	Herring, salted, brls.	Herring, smoked, lbs.	Mackerel, fresh on ice, lbs.	
		Vessels.			Boats.			Gill Nets.		Weirs						
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.					Value.
	<i>Annapolis County.</i>			¢			¢			¢		¢				
1	Margaretsville	1	18	540	4	12	240	15	1200	600				500		
2	Port George					15	300	25	1500	750				200		
3	Port Lorne					17	340	36	3000	1500				910		
4	Hampton	1	25	750	5	13	260	22	1300	650				400		
5	Phinny's Cove and Tray's Cove					17	340	22	1700	850				380		
6	Parker's Cove					16	260	32	1500	750				180		
7	Hillsboro' and Delap's Cove ...	1	24	720	5	30	600	57	2800	1400				500		
8	Victoria Beach and Granville..	8	340	10200	92	25	500	42	2900	1450				90		
9	Thorn's Cove to Ferry					10	200	20			4	600	60	14000	4000	
10	Clementsport and Bear River..	2	26	780	10	22	440	40	400	200	8	1600	45	31500	4000	
11	Annapolis East								390	300	7	500	5600			
12	Leguille										1	50	4000			
13	Round Hill											700				
14	Inland Lakes															
	Totals	13	433	12990	116	177	3180	311	16690	8450	20	2750	10300	3265	45500	8000

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—*Con.*

Numbers.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.						KINDS OF FISH.				Number.			
	Vessels.			Boats.			Gill Nets.	Trap Nets.	Weirs.	Seines.		Salmon, fresh in ice, lbs.	Herring.		Mackerel.					
	No.	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.	No.		Fathoms.	Value.		Salted, brls.		Fresh or frozen, lbs.	Smoked, lbs.	Salted, brls.	Fresh, shipped in ice, lbs.
<i>Digby County.</i>																				
1	Digby	20	911	28000	220	5	150	350	142			4	700	2000	240					1
2	Bayview					8	240	220	88											2
3	Broad Cove.					7	210	14	440											3
4	Rosaway					10	300	20	550	5	700			20000		10	7500			4
5	Waterford					6	180	11	220	2	100			15000			6000			5
6	Centerville					25	750	50	880					100						6
7	Sandy Cove					7	210	13	220	88		2	300	250						7
8	Mink Cove	1	34	1200	9	7	210	14	450	180	1645	2	300	250						8
9	Little River					20	600	40	1000	400		2	300	250						9
10	White Cove					5	150	10	220	88										10
11	Long Beach and Whale Cove					10	300	20	240	76										11
12	East Ferry					7	210	14	460	184										12
13	St. Mary's Bay					4	242	16		2	3296	5	600	28	2	3200				13
14	Weymouth					5	150	10	220	88	2	3296	1	500	100	8000				14
15	White's Cove					20	600	40	300	120	1	1648	1	100						15
16	Church Point	2	26	600	9	10	300	20	300	400				250		20				16
17	Metegun					25	750	50	4000	400						25				17
18	Cheticamp					8	240	16	320	128						40				18
19	St. Mary's					14	840	34	840	336						50				19
20	Smith Cove											11	825			20000	25000			20
21	Westport	27	571	20300	184	33	2500	120	9000	1000		10	600	2000	2000	400				21
22	Freeport	9	160	5300	58	60	2000	7000	4500			5	300	1000	850	50				22
23	Tiverton	7	150	5000	35	35	2000	70	3500						350	20				23
Totals.		66	1852	60400	535	331	13132	658	47230	21272	6	9885	27	3975	5750	3803	126000	25000	482	28700
Value		\$													100	17113	630	500	4820	1435

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Con.

Number.	DISTRICTS.	KINDS OF FISH.										FISH PRODUCTS.			TOTAL VALUE.	Number.						
		LOBSTERS.		Cod.	HAKE.		Haddock, cwt.	Pollock, cwt.	Halibut, lbs.	Alewives, brls.	Shad, brls.	Squid, brls.	Finan haddies, cases.	Haddock, shipped fresh, lbs.			Haddock, preserved in cans, lbs.	Fish oils, galls.	Fish used as bait, brls.	Fish used as manure, brls.		
		Preserved in cans, lbs.	Alive or fresh, tons.		Dried, cwt.	Tongues or sounds, brls.															Dried, cwt.	Sounds, lbs.
Digby County.																						
1	Digby	24000	14	4320	.....	10870	8500	9870	375	54500	.....	.....	.....	1700	.....	.....	6700	3550	.....	110,543 00	1
2	Baynew .....	.....	.....	96	.....	200	320	80	50	.....	.....	.....	.....	.....	.....	.....	320	50	.....	1,775 00	2
3	Broad Cove .....	.....	.....	50	.....	280	350	140	20	.....	.....	.....	.....	.....	.....	.....	400	70	.....	1,985 00	3
4	Rossway .....	.....	.....	160	.....	700	1000	200	20	.....	.....	.....	.....	.....	.....	.....	1000	150	.....	5,150 00	4
5	Waterford	1200	.....	32	.....	150	200	50	15	.....	.....	.....	.....	.....	.....	.....	150	20	.....	1,859 00	5
6	Centerville .....	.....	10	375	.....	2500	6000	500	50	1000	.....	.....	.....	600	.....	67200	3000	350	.....	26,154 50	6
7	Sandy Cove .....	.....	6	100	.....	280	300	60	40	.....	.....	.....	.....	.....	.....	.....	240	60	.....	2,136 00	7
8	Mink Cove .....	.....	2	150	.....	1000	1500	140	.....	.....	.....	.....	.....	.....	.....	.....	900	100	.....	5,495 00	8
9	Little River .....	.....	3	300	.....	2000	3000	1150	.....	.....	.....	.....	.....	500	.....	57600	2000	200	.....	22,127 00	9
10	White Cove .....	.....	.....	100	.....	600	900	50	.....	.....	.....	.....	.....	.....	.....	.....	600	75	.....	3,152 50	10
11	Long Beach and Whale Cove.	.....	6	340	.....	1350	2000	225	.....	.....	.....	.....	.....	.....	.....	.....	1400	180	.....	8,497 50	11
12	East Ferry .....	.....	3	175	.....	700	1000	100	.....	.....	.....	.....	.....	.....	.....	.....	800	75	.....	4,355 00	12
13	St. Mary's Bay .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,041 00	13
14	Weymouth .....	.....	3	.....	.....	.....	.....	.....	500	.....	.....	30	77	.....	.....	.....	.....	5	.....	1,327 50	14
15	White's Cove .....	.....	2	80	.....	.....	.....	200	50	.....	.....	21	.....	.....	.....	.....	.....	50	.....	1,820 00	15
16	Church Point .....	.....	2	150	.....	.....	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	1,320 00	16
17	Metegan .....	.....	3	500	.....	.....	.....	150	500	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	5,127 50	17
18	Cheticamp .....	.....	2	160	.....	.....	.....	48	150	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	1,698 00	18
19	St. Mary's .....	.....	2	420	.....	.....	.....	140	.....	.....	.....	.....	.....	.....	.....	.....	.....	90	.....	2,910 00	19
20	Smith Cove .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	600 00	20
21	Westport .....	.....	420	23000	20	10500	4000	19000	25000	60000	.....	.....	.....	.....	210000	.....	33520	5000	600	351,860 00	21
22	Freepoint .....	.....	90	11200	10	7600	1500	11400	11000	25000	.....	.....	.....	.....	.....	.....	14700	2400	700	168,445 00	22
23	Tiverton	18000	115	4200	20	1800	350	3100	8000	7000	.....	.....	.....	.....	.....	56600	6000	2000	270	84,129 50	23
Total		43200	681	45908	50	40450	30920	46753	45790	147500	30	98	90	2800	210000	181400	69730	14775	1575	815,008 00		
Value		6048	.....	206586	500	121350	15460	163635	137370	14750	135	980	360	6720	4250	21768	27892	7387	787		

RETURN showing the Number and Value of Vessels and Boats engaged

[illegible]

in the Fisheries, Fishing Material, &c.—Nova Scotia—Continued.

KINDS OF FISH.											FISH PRODUCTS.			TOTAL VALUE.	Number.
Salmon, fresh, in ice, lbs.	Herring, salted, brls.	Herring, smoked, lbs.	Cod, dried, cwt.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Bass, lbs.	Alewives, brls.	Shad, brls.	Fish Oils, galls.	Fish used as bait, brls.	Fish used as ma- nure, brls.		
														\$ cts.	
1250			25			850			1300					5,962 50	1
1000						1500			1700					335 00	2
										55				8,000 00	3
										3				563 50	4
										38				380 00	5
										95				950 00	6
	5		20	20			800	162	3	15			30	455 72	7
	50		10	14			250	150		10			90	498 00	8
	25	15000		10			150			9			40	572 50	9
	325	4000		390	175	195						200	130	4,790 00	10
36000	300	80000		250	90	45				15		400	210	12,385 00	11
3000	50			20	10	15						60	40	1,084 00	12
5000	150			95	15	25						150	30	2,355 00	13
3000	800	57600		160	50	100						160	75	6,698 50	14
2000	750	50500		60	25	30						200	100	5,425 00	15
2320	65			86	20	15						50	30	1,318 50	16
1000	47			50	40	10				151		25	10	2,406 50	17
1500	250			60	30	15						90	50	1,956 00	18
56070	2817	207100	1226	499	450	2350	1200	312	3006	388	1335	675	1675		
11214	12676	4142	5517	1746	1350	235	120	18	13527	3880	534	337	837	56,135 72	

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—*Con.*

Numbers.	DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING MATERIAL.				KINDS OF FISH.				Numbers.						
					Vessels.		Boats.		Gill Nets.		Trap Nets.		Seines.		Salmon.			Herring.		Mackerel.			
					No.	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.	No.	Fathoms.		Value.	Fresh in ice, lbs.	Smoked, lbs.	Salted, brls.	Fresh or frozen lbs.	Smoked, lbs.
<i>Lunenburg County.</i>																							
1	Chester.	3	121	500	27	140	2800	134	22000	3600	33	12000	12	8500	3200	9000	550	350	525	1
2	Mahone Bay and Martin's River.	21	1390	56550	235	185	2850	90	16200	2500	13	5000	10	6000	2000	2500	300	160000	250	2
3	Fox Point.	1	39	800	10	80	1425	116	33400	2100	17	12500	6800	840	570	1000	850	3
4	Mill Cove.	.....	.....	.....	74	1350	76	25000	1700	.....	.....	.....	15	10500	4300	750	420	.....	.....	.....	540	4
5	Lodge	.....	.....	.....	25	650	33	18000	1100	.....	.....	.....	12	7000	3600	350	250	.....	.....	.....	220	5
6	North-west Cove.	.....	.....	.....	60	1550	58	2400	1500	.....	.....	.....	20	14000	7000	820	720	.....	.....	.....	620	6
7	Aspotogan	.....	.....	.....	24	700	32	13000	1200	.....	.....	.....	8	5600	2400	300	600	.....	.....	.....	480	7
8	Sandy Beach.	.....	.....	.....	45	950	50	38000	1700	.....	.....	.....	10	6500	3000	250	440	.....	.....	.....	425	8
9	Blandford.	.....	.....	.....	90	2250	90	60000	3000	12	4000	16	11000	5000	250	540	250	.....	.....	.....	875	9
10	Little Tancook	.....	.....	.....	45	1500	40	33000	1800	6	1800	10	6000	2800	200	200	1000	.....	.....	.....	275	10
11	Big Tancook	.....	.....	.....	170	6000	180	120000	9025	10	2800	30	21000	9500	650	1050	4000	.....	.....	.....	1050	11
12	Deep Cove	.....	.....	.....	28	450	32	10500	850	8	1850	8	500	2000	1020	.....	.....	.....	.....	.....	95	12
13	Lunenburg to Cross Island.	74	5920	444000	1184	180	8100	145	28560	11800	34	10200	4	480	800	425	150	4780	25000	2221	12500	13	
14	La Have River to New Dublin	57	3990	285000	798	250	7800	165	35345	14130	26	10400	5	600	1000	900	350	2660	1000	2500	525	5500	14
15	Pefite Riviere to County Line.	8	560	40000	112	189	600	155	24465	12230	5	2000	4	340	800	425	350	2550	230	15
Totals.		164	12020	828850	2366	1585	38975	1396	479810	68535	147	50050	181	110520	54200	19970	1600	18960	187000	6000	9181	18000	
Value		3894	320	85320	935	120	91810	900	

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—*Con.*

Numbers.	DISTRICTS.	KINDS OF FISH.												Fish Products.				TOTAL VALUE.	Numbers			
		Lobsters.		Cod.		Hake.		Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alewives, brls.	Clams, brls.	Eels, brls.	Squid, brls.	Tom-cod or frost fish, lbs.			Fish oils, galls.	Fish used as bait, brls.	Fish used as manure, brls.
		Preserved in cans, lbs.	Alive or fresh, tons.	Dried, cwt.	Tongues and sounds, brls.	Dried, cwt.	Soundings, lbs.															% cts.
Lunenburg County.																						
1	Chester.....	68000		1400	4	100	.....	50	300	800	1500	2500	140	25	22	40	800	125	160	120	27,900 00
2	Malone Bay and Martin's River.....			22350	110	400	.....	60	140	300	20500	2400	20	40	2	25	400	7300	1300	40	114,575 00
3	Fox Point.....			1250	.....	100	.....	33	225	500	1000	400	6	.....	7	10	300	620	170	40	18,618 50
4	Mill Cove.....			325	.....	60	.....	45	135	200	.....	200	.....	.....	2	6	.....	120	40	40	9,837 00
5	Lodge.....			300	.....	70	.....	.....	40	.....	350	.....	2	.....	.....	3	.....	100	50	20	5,206 00
6	North-west Cove.....			225	2	70	50	.....	75	75	260	.....	9	20	4	6	.....	190	40	20	11,595 50
7	Aspidogon.....	48000		230	.....	.....	.....	25	50	.....	240	.....	.....	.....	3	.....	400	160	20	10	15,723 50
8	Sandy Beach.....			950	8	30	.....	100	450	.....	1500	.....	10	4	10	12	400	900	90	70	21,369 00
9	Blandford.....			450	4	.....	.....	120	60	.....	400	.....	.....	8	.....	2	.....	250	40	50	10,251 00
10	Little Tancook.....			720	.....	.....	.....	250	40	45	650	800	18	8	22	14	300	330	180	220	36,014 00
11	Big Tancook.....	19200		35	.....	.....	.....	12603	535	150	219000	300	15	57	.....	.....	100	4140	310	800	2,334 50
12	Deep Cove.....			98201	150	2160	.....	.....	.....	.....	30400	200	150	.....	45	.....	700	26125	120	600	401,375 00
13	Lunenburg to Cross Island.....	87600	285	74892	122	287	.....	560	720	.....	30400	200	150	.....	45	.....	700	26125	120	600	401,375 00
14	La Have River to New Dublin.....	22500	270	74892	122	287	.....	560	720	.....	30400	200	150	.....	45	.....	700	26125	120	600	401,375 00
15	Petite Riviere to County Line.....		160	11554	45	.....	.....	234	50	200	7000	.....	120	.....	30	.....	300	19450	120	750	88,077 00
Totals.....		245300	715	213222	445	3277	50	14155	2945	2450	283150	6800	498	164	153	120	3300	97770	2630	2820		
Value.....\$		34342	57200	959499	4450	9831	25	40542	8835	245	28315	340	2241	1148	1530	480	165	39108	1345	1410	1,383,450 50	

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.							
		Vessels.				Boats.		Gill-nets.		Trap-nets.		Seines.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Number.	Value.	Number.	Fathoms.	Value.
	<i>Queen's County.</i>			£			£		£		£		£		£
1	Liverpool and Brooklyn.	6	281	8900	51	54	1142	79	4058	1370	2	900	2	200	350
2	Western Head.					47	844	58	4174	1191			1	200	200
3	Black Point and Moose Harbour White Point and Somerville.					38	630	66	3148	871					
4	Port Joli and Port Hebert.					20	880	39	909	288					
5	Port Mouton.					108	2000	112	4650	1352			2	200	250
6	Eagle Head.					24	407	25	1360	410	1	400			
7	Berlin.					38	743	49	2486	750					
8	Port Medway.	2	147	5400	26	45	669	55	2696	791	3	1550			
9	Gull Island.					6	98	9	360	122					
10	Milton.					10	120	12	100	80					
11	Mill Village.					45	450	60	1650	584					
12	Greenfield.					6	60	20	100	40					
	Totals.	8	428	14300	77	441	8043	584	25691	7852	6	2850	5	600	800
	Value.	£													

the Fisheries, Quantity and Value of Fishing Material, &c,—Nova Scotia—*Con.*

KINDS OF FISH.																FISH PRODUCTS		TOTAL VALUE.	Number.
Salmon, fresh in ice, lbs.	Salmon, smoked, lbs.	Herring, salted, barrels	Mackerel, salted, barrels	Lobsters, preserved in cans, lbs.	Lobsters, alive or fresh, tons.	Cod, dried, cwt.	Hake, dried, cwt.	Haddock, cwt.	Pollock, cwt.	Halibut, lbs.	Smelts, lbs.	Alewives, barrels.	Clams, barrels.	Eels, barrels.	Shad, barrels.	Fish Oil, gallons.	Fish used as bait, brls.		
2680		846	500			2151	204	193	33	540		21		12		1081	80	21,149 90	1
		587	365			301	6	37	20	539						200	71	7,900 90	2
		1057	106	16800		342		24	52							120	57	10,124 00	3
		300		5760	59	340		38	4		2500	15		10			30	8,983 90	4
		3369	13	46944	118	664		47	19	1060			21			189	162	34,921 76	5
360		657	43	58560	5	65	4	6	4							28	36	12,423 60	6
		430	40	39264		137	2	15	54	100				35		132	57	8,750 26	7
9160	200	389	70	5760		2726		55	34	240						1272	67	18,256 70	8
		42				43										24	10	654 10	9
2000												80						2,605 00	10
3900	350										3500	340			5			5,135 00	11
2480	200											1022						760 00	12
20580	750	7677	1137	173088	182	6769	216	415	220	2479	6000	1478	21	57	5	3046	570		
4116	150	34546	11370	24232	14560	30460	648	1452	660	248	300	6651	147	570	50	1218	285	131,665 12	

the Fisheries, Quantity and Value of Fishing Material, &c.—Nova Scotia—*Con.*

KINDS OF FISH.															FISH PRODUCTS.		TOTAL VALUE.	Number.
Mackerel, salted, barrels.	Mackerel, fresh, shipped in ice, lbs.	Lobsters, in cans, lbs.	Lobsters, fresh, tons.	Cod, dried, cwt.	Hake, dried, cwt.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alewives, barrels.	Clams, barrels.	Eels, barrels.	Fish Oil, gallons.	Fish used as bait, barrels.			
																\$ cts.		
10			100	2250	500	200	600	1800	300	725	20	55	1200	1800	27,910	00	1	
40	70000	78816	600	800	125	80		1000					300	4500	73,731	74	2	
27	3000	24000	75	1050	450	130	200	5000	180	30		45	250	700	21,184	00	3	
15		28800	50	250	110	80		1000						75	550	11,237	00	4
50	350150	57600	700	7500	400	3200	325	112000			50		5000	6000	172,746	50	5	
30			250	2000	150	800	1800	2000		200			3000	1250	48,075	00	6	
12			75	300	100	200	300	1500					400	450	11,705	00	7	
140	2000		300	400		700	125	1000					200	500	34,830	00	8	
35	2000		200	2000				3000					2000	800	36,850	00	9	
			30					550			400					2,430	00	10
		14832		425	14	70	40				25		8	200		5,540	98	11
55				500	6	248	61				28			250		9,135	00	12
70				580		563	214						12	650		11,648	50	13
			19	485		168	257				40			275	350	13,812	50	14
		24816	110	7966	268	516	69	6500			90			2000	450	60,848	24	15
				1660		102								650		12,069	50	16
				34		51		3000		5000	35					3,430	00	17
200		16800	191	19152	1344	2016	784	2700	10000		50	150		3000		144,026	00	18
684	427150	245664	2670	47382	2282	9819	4465	13550	138300	5480	1623	220	120	19450	17350			
6840	21357	34392	213600	213219	6846	34366	13395	1355	13830	274	7303	1540	1200	7780	8675	701,209	96	

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia—Continued.

Number.	Districts.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.						KINDS OF FISH.						Number.	
		Vessels.			Boats.			Gill-Nets.		Trap-Nets.		Weirs.		Salmon, fresh, in ice, lbs.	Herring, salted, brls.	Mackerel, fresh, in ice, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, alive or fresh, tons.	Cod, dried, cwt.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.								Value.
Yarmouth County.																					
1	Sandford	1	13	300	5	40	600	80	6000	2400	1	3000	..	6000	1730	156000	115	845	1
2	Port Maitland	2	120	7000	40	54	5770	147	2680	1072	2	4000	..	7000	900	105000	..	84	1792	2	
3	East Pubnico	6	99	1550	24	34	475	70	300	120	1	1500	..	..	220	8300	..	82	3391	3
4	Argyle	14	934	34100	245	62	2975	65	1850	740	1	600	..	..	80	300	47712	..	1000	4
5	West Pubnico	18	1077	32150	255	50	700	100	5000	2000	2	5000	..	2600	450	3700	19550	142	12027	5	
6	Yarmouth	5	364	1400	93	80	800	120	2000	800	2	2400	3	450	2500	108300	317208	1185	48140	6	
7	Tusket Wedge	8	10	250	5	30	800	45	2000	800	..	..	..	..	300	112800	..	29	3878	7
8	Sluice Point	..	..	..	..	180	1440	200	14000	5600	..	..	..	9000	..	..	..	..	230	8
9	Tusket River	..	..	..	..	30	200	40	2500	1000	..	1	100	600	..	..	..	..	..	9
10	Salmon River	..	..	..	..	25	200	25	2000	800	..	..	..	..	..	..	..	..	..	10
11	Fel Lake	1	40	800	5	20	1000	40	1500	600	..	..	1	150	800	..	..	..	15	11
12	Arcadia and Little River	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
Totals		48	2657	77550	672	626	15590	962	41830	16732	9	16500	6	25200	7980	494400	384470	1637	71318		
Value		..																			

RETURN showing the Number and Value of Vessels and Boats engaged in the Fisheries, &c.—Nova Scotia.—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													FISH PRODUCTS			Total Value.	Number.	
		Cod, tongues and sounds, brls.	Hake, dried, cwt.	Hake, sounds, lbs.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Hallbut, lbs.	Smelts, lbs.	Alewives, brls.	Eels, brls.	Shad, brls.	Squid, brls.	Alewives, smoked, No.	Finman haddies, cases.	Tom-cod or frost fish, lbs.	Fish Oils, galls.			Fish used as bait, brls.
Yarmouth County.																				
1	Sanford	.....	.....	.....	174	.....	2360	.....	400	.....	50	.....	.....	.....	310	.....	2000	400	300	30,982 50
2	Port Maitland	.....	.....	.....	569	770	.....	12500	.....	.....	.....	.....	.....	.....	.....	.....	.....	600	3000	36,679 50
3	East Pubnico	.....	90	400	258	173	.....	1250	.....	.....	.....	50	5	.....	.....	.....	200	300	.....	25,990 50
4	Argyle	.....	.....	.....	15	37	.....	.....	300	.....	.....	.....	.....	10000	.....	.....	400	150	.....	13,883 18
5	West Pubnico	12	2280	.....	2280	2040	.....	10000	8000	.....	15	10	40	.....	60	.....	3000	500	.....	87,826 00
6	Yarmouth	20	3690	.....	3690	1386	.....	175860	7900	.....	.....	25	300	.....	.....	.....	2200	500	.....	411,003 12
7	Tusket Wedge	.....	.....	.....	614	552	.....	.....	60	.....	6	200	.....	.....	.....	.....	4900	500	.....	37,136 00
8	Sluice Point	.....	.....	.....	.....	.....	.....	.....	150	20	.....	.....	.....	40000	.....	30000	.....	50	.....	3,285 00
9	Tusket River	.....	.....	.....	.....	.....	5000	.....	3800	60	20	.....	.....	.....	.....	30000	.....	.....	.....	25,020 00
10	Salmon River	.....	.....	.....	.....	.....	700	.....	1000	.....	.....	.....	.....	.....	.....	10000	.....	.....	.....	4,540 00
11	Bel Lake	.....	.....	.....	.....	.....	500	.....	5000	.....	.....	.....	.....	.....	.....	.....	150	.....	.....	3,142 50
12	Arcadia and Little River	.....	.....	.....	.....	.....	.....	.....	2000	.....	50	50	.....	.....	.....	.....	.....	.....	.....	4,425 00
	Totals	40	140	400	7600	4958	6200	201970	83900	5825	441	70	545	50000	370	40000	12700	3000	3300	683,913 30
	Value	400	420	200	26600	14874	620	20197	4195	26212	4410	700	2180	400	888	2000	5080	1500	1650	

RECAPITULATION

Of the Yield of the Fisheries of District No. 3, Nova Scotia, 1893.

Kinds of Products.	Quantities.	Rate.		Value.	
		£	cts.	£	cts.
Salmon, fresh, in ice.....	Lbs. 140,920	0	20	28,184	00
do smoked.....	" 2,350	0	20		470 00
Herrings, salted.....	Brls. 69,741	4	50	313,834	50
do fresh or frozen.....	Lbs. 313,000	0	05	1,565	00
do smoked.....	" 283,600	0	02	5,672	00
Mackerel, salted.....	Brls. 11,484	10	00	114,840	00
do fresh (shipped in ice).....	Lbs. 976,250	0	05	48,812	50
Lobsters, preserved, in cans.....	" 1,091,722	0	14	152,841	08
do shipped alive.....	Tons. 5,961	80	00	476,880	00
Cod, dried.....	Cwt. 394,081	4	50	1,773,364	50
do tongues and sounds.....	Brls. 574	10	00	5,740	00
Hake, dried.....	Cwt. 49,865	3	00	149,595	00
do sounds.....	Lbs. 34,237	0	50	17,118	50
Haddock, dried.....	Cwt. 87,199	3	50	305,196	50
do preserved, in cans.....	" 181,400	0	12	21,768	00
do shipped fresh, in ice.....	" 210,000	0	02	4,200	00
do smoked (finnan haddies).....	Cases. 3,170	2	40	7,608	00
Pollock.....	Cwt. 63,001	3	00	189,003	00
Trout.....	Lbs. 32,950	0	10	3,295	00
Halibut.....	" 824,369	0	10	82,436	90
Smelts.....	" 104,180	0	05	5,209	00
Bass.....	" 3,012	0	06	180	72
Alewives, pickled.....	Brls. 12,730	4	50	57,285	00
do smoked.....	Nc. 50,000	per M	8 00	400	00
Clams.....	Brls. 1,105	7	00	7,721	00
Eels.....	" 803	10	00	8,030	00
Shad.....	" 641	10	00	6,410	00
Squid.....	" 755	4	00	3,020	00
Tom cods.....	Lbs. 43,300	0	05	2,165	00
Fish, oil.....	Galls. 207,331	0	40	82,932	40
do used as bait.....	Brls. 42,375	0	50	21,187	50
do do manure.....	" 9,561	0	50	4,780	50
do guano.....	Tons. 220	25	00	5,500	00
Total.....				3,907,259	60

TABLE showing the Number and Value of Vessels, Boats, Nets and Weirs engaged in the Fisheries of District No. 3 of Nova Scotia, and estimate of other Material not included in the Returns.

Material.	Value.	Total.
	\$	\$
358 vessels (aggregate tonnage, 19,644).....	1,095,885	
4,613 boats.....	118,225	
930,051 fathoms of gill nets.....	163,011	
176 trap nets.....	93,735	
61 weirs.....	8,625	
246 seines (128,620 fathoms).....	69,550	1,549,031
139,645 lobster traps at 80c.....	111,716	
39 do canneries.....	32,725	144,441
136 freezers and ice houses.....	16,605	
1,556 smoke and fish houses.....	90,171	
567 piers and wharves.....	78,387	
37 sailing and steam snacks.....	56,315	
Trawl gear.....	41,425	282,903
Total.....		1,976,375

NUMBER of Men employed in the Fisheries of District No. 3, Nova Scotia.

In steam and sailing vessels.....	4,318
In boats.....	5,595
In factories.....	614
Total number of men.....	10,527

RETURN showing the Number and Value of Vessels and Boats engaged in the
Number of Men employed in the Fishery Industry of

COUNTIES.	FISHING VESSELS AND BOATS.							FISHING MA-				
	Vessels.				Boats.			Gill Nets.		Trap-Nets.		Wairs
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.
			\$			\$			\$		\$	
Cape Breton.....	8	119	2,250	39	846	20,369	1,591	77,232	35,000	...	...	...
Inverness.....	12	315	7,800	71	785	20,577	1,865	68,784	30,346	1	800	73
Richmond.....	68	2,059	38,020	449	1,283	17,665	1,625	202,920	63,950	...	...	...
Victoria.....	2	48	400	6	795	13,914	1,282	36,757	17,703	3	1,300	...
Antigonish..	1	10	100	3	222	3,745	305	245,890	8,236	...	...	1
Colchester.....	...	...	...	...	97	1,810	166	12,825	2,365	...	...	14
Cumberland.....	...	...	...	...	172	5,514	215	2,449	1,374	...	...	...
Guysborough.....	13	372	5,500	59	1,987	50,383	2,479	251,032	60,182	74	13,185	...
Halifax.....	81	2,292	65,323	502	2,605	42,743	2,777	330,035	41,225	15	28,000	...
Hants.....	...	...	...	...	117	1,358	122	7,564	1,537	...	...	8
Pictou.....	...	...	...	...	273	7,073	378	10,174	8,276	...	...	...
Annapolis.....	13	433	12,990	116	177	3,480	311	16,690	8,450	...	...	20
Digby.....	66	1,852	60,400	535	331	13,132	658	47,230	21,272	6	9,885	27
King's.....	6	96	1,850	14	81	1,785	150	9,750	3,675	...	...	8
Lunenburg.....	164	12,020	828,850	2,366	1,585	38,975	1,396	479,810	68,535	147	50,050	...
Queen's.....	8	428	14,300	77	441	8,043	584	25,691	7,852	6	2,850	...
Shelburne.....	53	2,158	99,945	538	1,372	37,220	1,534	309,050	36,495	8	14,450	...
Yarmouth.....	48	2,657	77,550	672	626	15,590	962	41,839	16,732	9	16,500	6
Totals.....	543	24,859	1,215,278	5,447	13,795	303,376	18,400	2,175,673	433,205	269	137,020	157

Fisheries, Fishing Materials and the Kinds and Quantities of Fish, as well as the the Province of Nova Scotia, for the Year 1893.

TERIAL.				KINDS OF FISH.									
W eirs.		Seines.		Salmon, barrels.	Salmon, fresh, in ice, lbs.	Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved in cans, lbs.	Lobsters, preserved in cans, lbs.
Value.	No.	Fathoms.	Value.										
¢			¢										
.....	1	300	1,200	17	14,627	.....	.....	2,830	31,400	.....	2,072	2,000	319,784
510	5	805	1,610	18	96,682	2,360	.....	7,095	190,600	.....	5,324	2,600	284,312
.....	.....	.....	.....	10	4,522	.....	.....	10,586	.....	.....	3,942	1,080	523,546
.....	.....	.....	.....	209	4,450	2,232	.....	1,506	5,600	.....	1,171	5,942	84,328
10	.....	.....	.....	.....	41,350	.....	.....	1,512	.....	.....	591	19,200	225,456
6,075	.....	.....	.....	.....	61,152	.....	.....	.....	.....	12,000	.....	.....	32,230
.....	1	46	50	.....	11,820	.....	.....	233	.....	.....	.....	400	479,365
.....	30	4,435	3,410	12	36,990	1,112	660	18,531	.....	.....	3,649	699,500	1,136,476
405	44,031	72,515	.....	.....	30,212	.....	1,480	9,827	40,000	.....	6,606	28,700	892,096
295	.....	.....	.....	.....	28,205	.....	.....	55	.....	1,000	.....	.....	.....
.....	.....	.....	.....	.....	50,300	.....	.....	180	88,620	.....	5	4,050	866,220
.....	.....	.....	.....	.....	10,300	.....	.....	3,265	.....	45,500	.....	8,000	.....
2,750	25	2,500	5,750	.....	500	.....	.....	3,803	126,000	25,000	482	28,700	43,200
3,975	32	12,900	7,800	.....	56,070	.....	.....	2,817	.....	207,100	.....	.....	.....
900	181	110,520	54,200	.....	19,970	.....	1,600	18,960	187,000	6,000	9,181	18,000	245,300
.....	5	600	800	.....	20,580	.....	750	7,677	.....	.....	1,137	.....	173,088
.....	3	2,100	1,000	.....	8,300	.....	.....	25,239	.....	.....	684	427,150	245,664
1000	.....	.....	.....	.....	25,200	.....	.....	7,980	.....	.....	.....	494,400	384,470
15,515	688	178,237	148,335	266	521,230	5,704	4,490	122,096	668,620	296,600	34,844	1,739,722	5,935,535

RETURN showing the Number and Value of Vessels and Boats engaged in the
Number of Men employed in the Fishery Industry of

COUNTIES.	KINDS OF										
	Lobsters, alive or fresh, tons.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Hake, dried, cwt.	Hake, sounds, lbs.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bass, lbs.
Cape Breton.....		13,877	...	21	...	2,442	454	6,625	14,290	15,050	...
Inverness.....		29,702	30	1,394	1,420	1,700	10	38,160	5,690	38,000	200
Richmond.....	39	33,778	3	30	...	4,800	492	...	1,500	17,951	...
Victoria.....		21,514	5	343	160	1,237	...	7,574	5,400	10,780	...
Antigonish.....		712	...	1,275	3,589	77	...	2,500	...	3,145	1,795
Colchester.....		190	...	...	...	...	...	3,200	2,950	14,000	1,000
Cumberland.....		275	...	23	...	101	87	1,000	...	78,910	...
Guysborough.....		21,280	...	325	...	4,914	683	37,000	20,730	33,550	...
Halifax.....	131½	30,742	12	4,934	6,384	3,924	2,130	7,900	220,111	9,450	...
Hants.....		194	...	...	...	2	...	9,500	300	3,500	2,278
Pictou.....		103	...	...	...	...	...	1,050	1,000	37,686	400
Annapolis.....	76	8,256	39	3,500	2,867	77,958	4,173	8,400	49,770	2,000	2,700
Digby.....	681	45,908	50	40,450	30,920	46,753	45,790	...	147,500	...	...
King's.....		1,226	...	...	...	499	450	2,350	1,200	...	312
Lunenburg.....	715	213,222	445	3,277	50	14,155	2,945	2,450	283,150	6,800	...
Queen's.....	182	6,769	...	216	...	415	220	...	2,479	6,000	...
Shelburne.....	2,670	47,382	...	2,282	...	9,819	4,465	13,550	138,300	5,480	...
Yarmouth.....	1,637	71,318	40	140	400	7,600	4,958	6,200	201,970	83,900	...
Totals.....	6,131½	546,448	624	58,210	45,790	106,396	66,857	147,459	1,096,340	366,202	8,685

†Haddock, fresh, etc., valued at \$33,576.

*Alewives smoked, valued at \$400.

Fisheries, Fishing Materials and the kinds and Quantities of Fish, as well as the the Province of **Nova Scotia**, for the Year 1893.

FISH.								FISH PRODUCTS.						TOTAL VALUE.	
Alewives, brls.	Oysters, brls.	Clams, brls.	Eels, brls.	Shad, brls.	Squid, brls.	Flounders, lbs.	Tom-cod or Frost Fish, lbs.	Coarse and mixed fish, brls.	Fish Oils, galls.	Seal skins, No.	Fish used as bait, brls.	Fish used as manure, brls.	Fish guano, tons.		
747	31	.....	265	8	157	.....	600	8	8,237	625	2,780	75	78	8 cts.
2,292	1,050	.....	645	.....	1,397	.....	.....	1,139	17,475	124	1,742	80	23	182,705 21
17,71	.....	227	246	.....	92	17,300	.....	20	11,326	.....	1,130	.....	.....	357,753 83
261	1,653	.....	230	.....	170	.....	4,895	488	9,692	349	1,821	.....	.....	369,629 89
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	162,325 96
132	196	.....	141	.....	.....	.....	.....	.....	1,981	.....	1,076	228	.....	71,936 00
65	.....	.....	.....	270	.....	.....	.....	.....	180	.....	114	.....	.....	22,448 00
1,025	350	.....	25	244	.....	.....	.....	.....	.....	.....	990	.....	.....	86,376 00
1,525	.....	614	483	600	7,934	4,950	2,750	2,493	25,096	.....	9,981	2,875	.....	593,141 00
686	.....	610	130	.....	12	37,500	.....	217	19,057	51	2,170	459	.....	498,883 00
528	.....	.....	.....	232	.....	.....	.....	157	.....	.....	.....	.....	.....	13,014 00
160	208	.....	200	.....	.....	.....	.....	10	.....	.....	1,473	620	.....	141,807 00
.....	
270	.....	700	32	80	.....	.....	.....	.....	3,300	.....	3,315	191	220	135,877 00
30	.....	.....	.....	98	90	.....	.....	.....	69,730	.....	14,775	1,575	.....	815,008 00
3,006	.....	.....	.....	388	.....	.....	.....	.....	1*335	.....	675	1,675	.....	56,135 72
498	.....	164	153	.....	120	.....	3,300	.....	97,770	.....	2,690	2,820	.....	1,383,450 50
1,478	.....	21	57	5	.....	.....	.....	.....	3,046	.....	570	.....	.....	131,665 12
1,623	.....	220	120	.....	.....	.....	.....	.....	19,450	.....	17,350	.....	.....	701,209 96
*5,825	.....	.....	441	70	545	.....	40,000	.....	12,700	.....	3,000	3,300	.....	683,913 30
21,922	3,488	2,556	3,168	1,995	10,517	59,750	51,545	4,532	300,375	1,149	65,652	13,898	3003	6,407,279 49	

RECAPITULATION

Of the Yield and Value of the Fisheries of the whole Province of Nova Scotia,
for the year 1893.

Kinds of Fish.	Prices.	Quantity.	Value.	Total Value.
	\$ cts.		\$ cts.	\$ cts.
Salmon, pickled..... Brls.	16 00	266	4,256 00	
do fresh..... Lbs.	0 20	521,230	104,245 20	
do in cans..... "	0 15	5,704	855 80	
do smoked..... "	0 20	4,490	898 00	110,255 00
Herring, pickled..... Brls.	4 50	122,096	549,431 00	
do smoked..... Lbs.	0 02	296,600	5,932 00	
do fresh..... "		668,620	5,367 50	560,730 50
Mackerel, pickled..... Brls.		34,844	441,880 00	
do fresh..... Lbs.		1,739,722	140,429 14	582,309 14
LOBSTERS, preserved..... "	0 14	5,935,535	830,972 88	
do fresh and alive..... Tons.		6,131 $\frac{3}{4}$	483,710 00	1,314,682 88
Cod, dried..... Cwt.	4 50	546,448	2,459,016 00	
do tongues and sounds..... Brls.	10 00	624	6,240 00	2,465,256 00
Hake, dried..... Cwt.	3 00	58,210	174,630 00	
do sounds..... Lbs.	0 50	45,790	22,895 00	197,525 00
Haddock, dried..... Cwt.	3 50	106,396	372,386 00	
do fresh..... Lbs.	0 02	210,000	4,200 00	
do preserved..... "	0 12	181,400	21,768 00	
do smoked (finnan haddies)..... Cases.	2 40	3,170	7,608 00	405,962 00
Pollock..... Cwt.	3 00	66,857		200,571 00
Trout..... Lbs.	0 10	147,459		14,745 90
Halibut..... "	0 10	1,096,340		109,633 90
Smelts..... "	0 05	366,202		18,310 05
Bass..... "	0 06	8,685		520 72
Alewives..... Brls.	4 50	21,922	98,648 50	
do smoked, per 100..... No.	0 80	50,000	400 00	99,048 50
Oysters..... Brls.	3 00	3,488		10,464 00
Clams..... "		2,556		17,665 00
Eels..... "	10 00	3,168		31,680 00
Shad..... "	10 00	1,995		19,950 00
Squid..... "	4 00	10,517		42,068 00
Flounders..... Lbs.	0 05	59,750		2,987 50
Frost fish..... "	0 05	51,545		2,576 75
Coarse and mixed fish..... Brls.		4,532		8,180 00
Fish oil..... Galls.	0 40	300,375		120,149 40
do bait..... Brls.		65,652		56,103 00
do as manure..... "	0 50	13,898		6,950 00
do as guano..... Tons.	25 00	300 $\frac{1}{2}$		7,518 75
Seal skins..... No.	1 25	1,149		1,436 50
Total for 1893.....				6,407,279 49
do 1892.....				6,340,724 01
Increase.....				66,555 48

RECAPITULATION

SHOWING the Number and Value of Vessels, Boats, Nets, &c., engaged in the Fisheries of Nova Scotia, with an Approximate Value of other Fishing Material for the year 1893.

Articles.	Value.	Total.
	\$	\$
543 vessels, 24,859 tons.	1,215,278	
13,795 boats	303,376	
2,175,673 fathoms of gill nets.	433,205	
668 seines, 178,237 fathoms	148,335	
269 trap nets	137,020	
157 weirs.	15,515	
		2,252,729
392,141 lobster traps.	277,282	
182 canneries	157,447	
		434,729
114 smelt bag-nets.	4,954	
Hand-lines, trawls, &c.	90,745	
181 freezers and ice-houses.	31,765	
3,018 smoke and fish houses	133,373	
Steamers, smacks, dories, &c	79,985	
Fishing piers and wharfs.	178,502	
		519,324
Total.		3,206,782

APPENDIX No. 6.

NEW BRUNSWICK.

District No. 1, comprises the county of Charlotte.—Inspector J. H. Pratt, St. Andrew's.

District No. 2, comprising the counties of Restigouche, Gloucester, Northumberland, Kent and Westmoreland.—Inspector R. A. Chapman, Moncton.

District No. 3, comprising the counties of Albert, St. John, King's, Queen's, Sunbury, York, Carleton and Victoria.—Inspector H. S. Miles, Ormocto.

DISTRICT No. 1.

REPORT ON THE FISHERIES OF DISTRICT No. 1, NEW BRUNSWICK, COMPRISING THE COUNTY OF CHARLOTTE, FOR THE YEAR 1893, BY INSPECTOR JOHN H. PRATT.

ST. ANDREW'S, N.B., 31st December, 1893.

Honourable Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my fifth annual report on the fisheries of district No. 1, New Brunswick, comprising the county of Charlotte and the adjacent islands in Passamaquoddy Bay.

I also inclose synopsis of the reports of the several local officers with tabulated statements of the yield and value for the year just closed.

I regret very much to have to report that the returns for many kinds of fish will show a slight falling off when compared with last season, which I attribute, not so much to any serious decrease in the schools of fish, but to a more painstaking work on the part of the several officers in collecting the statistics.

The value of the catch for the past two years are:—

Value of catch for 1892	\$863,465 90
do 1893.....	756,253 85
Decrease for the year....	<u>\$107,212 07</u>

The above decrease is owing to the small catch of herring at Grand Manan, for smoking purposes, which on that island is less than in 1892, by \$175,528. Fishermen there did not engage in the smoked-herring industry on account of the small prices offered for them in the several markets, and devoted more of their time to line fishing which proved fairly remunerative. Prices remained quite satisfactory during the season, and in the whole of district No. 1 the fishermen are quite well pleased with their season's operations.

It is a pleasure to note that our fishermen are annually becoming more alive to the value and importance of the fisheries on our coasts. More enterprise and vigour is manifested, fishing in places and at seasons never before thought of is now carried on, competition for fishing privileges is growing keener, and altogether a decided change in the condition of affairs is quite apparent.

Three hundred and thirty-one licenses for herring weirs were issued by me during the year, which is an increase over previous years, mainly owing to better facilities being afforded the fisherman to become acquainted with any vacant privileges, and each and every applicant for licenses being placed on an equal footing.

SALMON.

A great increase over previous years has been observed in the number of this fine fish ascending the River Ste. Croix this season. Some lawless characters, residents of Milltown and St. Stephen, attempted some illegal fishing on the river, but by the activity of our fishery officers, acting in concert with those on the United States side of the boundary, the work was soon broken up. Each season netting is attempted on this river, and only by the employment of vigilant officers will such work be prevented.

Much fine sport was afforded numerous sportsmen at Milltown by angling during the season, and they were well pleased with the protection afforded by the officers.

Salmon also ascended the St. George River through the several fishways there, and a special guardian was employed on duty each night to see that poaching was not attempted as in previous years.

MACKEREL.

This much prized and looked for fish did not enter the Bay of Fundy last season, although confidently expected. Extensive preparations were made for their reception, but the season passed away and only a couple of hundred appeared. Considerable discussion of course ensued as to the cause of their non-appearance, but the matter still remains enshrouded in mystery. Several United States seining schooners sought for them in several parts of the bay but were unsuccessful, although good hauls were made just outside of the Bay of Fundy.

LOBSTERS.

A large increase is noticed in the catch of lobsters, due not only to the fishing being slightly better than previous seasons but also to the fact of a larger number of men being engaged in fishing for them. Prices were considerably in advance of previous seasons.

Many persons have begun this fishing without due regard to the close seasons, therefore, during the week just closed the crew of this ship and the several fishery officers were busy in seeking and destroying several hundred traps and releasing their contents. Great care had been taken in the manner of setting those traps, with a view to their being unnoticed by a casual observer.

HERRING.

The large herring did not strike into the Bay of Fundy last winter for some reason at present unknown. This fact made fishing matters very slack until spring opened. However, large numbers of herring fishermen embarked in the lobster fishing and did fairly well. Good prices were paid for herring during latter part of season, more especially sardine herring.

Numbers of schooners secured cargoes of large herring at Grand Manan, which brought very good prices in the several markets.

Many of the sardine weirs made large hauls, one weir for instance, receiving over \$6,000 for a few months fishing.

The herring fishing at Dark Harbour has shown a wonderful increase over all previous years, large hauls of fish being made throughout the entire season. A special report on the Dark Harbour fishery has already been sent you by the lessee, through me.

COD AND POLLOCK.

A decrease will be noticed in the catch of cod and pollock, which I attribute more to the effects of the numerous schools of dogfish than to any scarcity of the schools of cod and pollock. Good prices and a brisk demand prevailed during the season.

HADDOCK.

The returns show an increase in the haddock catch over last season, the fish not only being more plentiful but there were more persons employed in the fishery. Better prices also prevailed.

HAKE.

Quite an increase over last season is noticed in the catch of hake, and the fish were found very plentiful on the several fishing grounds throughout the season. Some big hauls were made by many of the vessels employed at this fishery.

FISHWAYS.

All the fishways in this district were well looked after by the several fishery officers and are now in fairly good repair. Some few changes may be found necessary next season in several on the Magaguadavic River, but this will be a matter for a subsequent and special report.

ILLEGAL FISHING.

Owing to the trouble experienced in procuring good officers, some illegal fishing for herring was attempted on a number of nights by fishermen at North-west harbour during the latter part of the summer. Considerable difficulty was experienced in endeavouring to prevent it, but by placing a special officer there for over a month the work was stopped. A number of the guilty ones were discovered and will be dealt with as the law directs.

On the herring spawning grounds at Grand Manan, some illegal fishing by gill-nets was attempted by a number of vessels from various parts of the Bay of Fundy, but after a descent was made on them by the "Curlew" one morning at daylight, the nets seized and the owners fined, no more trouble was experienced in that direction. A special has now been appointed for protecting those spawning grounds and a better guardianship will probably be the result.

CAMPOBELLO FISH FAIR.

The revival of the old time fish fair at Welshpool, Campobello, in October last, was a great benefit to the fishermen of the islands, not only from a business standpoint, but also looking at the matter socially.

Fish of all kinds were brought there and placed on exhibition, the numerous exhibitors anxiously endeavouring to secure the much coveted prizes that were offered by the officials of the fair. Besides the highly creditable exhibits of fish, a varied programme of sports on land and water were indulged in, ending with a dance and a supper in the evening.

Such gatherings as this, having such a worthy object in view, should be given every encouragement in our fishing centres. Annual gatherings might be held at a different place each season, a fisheries' conference held at the same time, attended by delegates elected from each fishing village who could exchange views and discuss all matters relating to our fisheries, and there is no doubt immense benefit would be derived from these meetings. All trades and business interests are now organized to protect and forward their interests and the fishermen and those interested in the industry should do the same.

During the past year, up to August 31st, the inspector for this district, had control of District No. 3, which comprises eight of the other counties, compelling him to do considerable travelling inland and absent himself from the duties of this district and the "Curlew," very much of his time. An inspector has now been appointed in No. 3 District.

Overseer Campbell, of St. Andrew's, states that there has been very few violations of the fisheries regulations during the season in his district. Weir fishing has been the principal fishing carried on.

There has been a good run of herring in the weirs and large schools of "britt" were seen during the season.

It is very perplexing to understand, with such large schools of young herring in the bay during the last few years, why there should be so few large herring; very few even fit for smoking have been taken.

More weirs were fished this year than in 1892, and they made larger catches this year than last, with paying prices.

I notice no decrease in the schools of sardine herring from year to year, but if anything, an increase.

The lobster catch was less than last season, owing to a less vigorous prosecution of the industry. They are annually becoming more scarce and unless a close time for a year or two is made, will soon have to be abandoned. Winter fishing for them is the cause, and for this inner bay at least, this fishing should not begin till March.

Only a few stray mackerel were found in the bay this season.

There has been no herring smoked by any person here and very little pumace pressed. The use of small herring for manure I have always prevented, as it would, no doubt, soon affect the schools of fish on the shore.

Little or no poaching was attempted in Chamcook Lakes during the season.

I have fifty-five licensed weirs and weir privileges in my district, and expect to have an increase during the coming season.

Overseer Todd, of Ste. Croix, reports:—The catch of fish was about the same as in 1892. Sardines were plentiful and if there had been a good demand, larger quantities would have been disposed of.

Salmon were very plentiful all the season in this river. Large numbers passed through the several fish-ways. A guardian will be required at Milltown next season, as many reports of illegal work there came to my hearing this fall, but the evidence was not sufficient to have parties prosecuted.

The sardine catch are all exported, all other fish caught are used at home chiefly.

The seven fish-ways in my district are in good repair and have been effective during the season.

Special Guardian Cross of Beaver Harbour reports:—There has been a decrease in the catch of large herring this past season, not that there was any scarcity of those fish, but to a decreased number of men engaged in their capture.

The smoked herring industry was allowed to languish this past season owing to the low prices being paid for them in the several markets.

Mackerel failed to strike inshore this season for some reason as yet unknown to us.

The lobster fishing is gaining in importance to us, the catch has been larger and more men engaged in it each year.

Line fishing has been about the same as last season, but a decrease in the catch of sardines. Sardines seem to be decreasing annually in this neighbourhood, owing, I believe, to the amounts captured each season.

There are no abuses existing in my district. I believe all that is necessary is being done for the fisheries. The close seasons have been well observed.

Overseer Brown, of Campobello Island, reports:—The catch has been below the average of 1892. There has been a decrease in the catch of all kinds of fish with the exception of hake and herring. Hake have not been so plentiful for years. Dog-fish did not interfere with fishing as in former years, although they were very numerous.

The catch of sardine herring shows a pleasing increase over last season, although there were very few caught till the latter part of the season.

There was a decrease in the catch of pollock, also in the lobster catch.

Lobsters less than 9½ inches should not be taken, as they are of little or no value to the fishermen and do not pay for the handling.

The several close seasons have been generally observed and no abuses of any account exist.

Overseer McLaughlin, of Grand Manan, states that there is a falling off in the catch of all kinds of fish excepting hake. The decrease in the cod catch has been gradual for the last ten years, which can only be attributed to the marvellous increase in the schools of dogfish and sharks in the Bay of Fundy.

The herring fishing is one-third less than last year, not from a scarcity of herring, but from the manner in which they have been harrassed by the dogfish, pollock, and silver hake. Herring have been driven ashore by pollock and silver hake on many occasions. The weirs at Whitehead did not fish at regular times as in former years, that at "weir times" the hake and pollock would rush through Cow Passage with a sound like Niagara Falls, and all the herring taken there were caught at times that the tide did not serve.

The pollock have been so well fed by the herring that they did not take the hook, and this fact explains the decrease in the pollock catch.

The Dark Harbour fishery has been very successful, the herring hardly leaving it a day since the beginning of year.

The Three Island herring fishery has been, as usual, very good, and a large number of vessels from various parts of the bay have been fishing there.

The best herring weir in Grand Manan was badly injured by a heavy gale and was not repaired. If repairs had been made, in all probability the catch of the large herring would have equalled last season's.

Large quantities of bloaters and finnan haddies were put up by some fishermen on this island this season and found a ready sale.

One-quarter of the fish taken on this island are marketed in Canada and the remainder in the United States.

No abuses exist excepting the bad habit of leaving nets in the water for days at a time. The temptation for fishermen at North Head to do so is very great as they can pick what bait is required from their nets as they proceed to and from the fishing grounds without the bother of drying nets. They state that the bait keeps better in the cold water than out, unless they have plenty of ice. This pernicious practice has been introduced within the last fifteen years and is believed to be the principal cause of the scarcity of large herring in the vicinity of North Head for years past. I would recommend that nets be not allowed to be set previous to five in the evening and to be taken out by eight in the morning.

The close seasons have been very well observed, excepting some poaching at Wood Islands. October 4th last, noticing nets being set there, I wired the Inspector, and he appeared on the morning of the 6th October, with the Cruiser "Curlew" seized and destroyed nets, and fined the owners thereof.

I would suggest that fishing with gill-nets, torching for herring, be licensed as weir fishermen now are, and thus compel nets to be removed from the water daily.

Special Guardian Haney, of West Isles, reports that he experiences considerable trouble in procuring the estimates of the catch from the fishermen and on their part a disposition to underrate the values of material employed. There was an increase in the value of the catch over last season, and the fishermen generally were well pleased with their year's operations. The same number of men were employed.

There was a falling off in the catch of large herring.

There was a large increase in the catch of lobsters and a greater number of men and boats employed in the industry.

A decreased catch of sardine herring owing, I think, to the presence of dogfish, but an increased price was paid for them.

The close seasons have not been as well observed as they should owing to the facilities that exist for illegal work at night in one or two localities, but I will have a change next season.

I have the honour to be, sir,

Your obedient servant,

JOHN H. PRATT,

Inspector of Fisheries.

DISTRICT No. 2.

REPORT ON THE FISHERIES OF DISTRICT No. 2, COMPRISING THE COUNTIES OF RESTIGOUCHE, GLOUCESTER, NORTHUMBERLAND, KENT AND WESTMORELAND, FOR THE YEAR 1893, BY INSPECTOR R. A. CHAPMAN.

MONCTON, N.B., 30th December, 1893.

Honourable Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my report for the year 1893, of the fisheries of District No. 2, in the province of New Brunswick, with extracts from the exports of local fishery overseers, also tabulated statements, giving the products and values by districts and counties together with a return of the capital employed in the prosecution of the fisheries. These returns fully confirm the estimates given in my preliminary report and show a very large increase in the aggregate worth of total catch of last year, the figures are:

In 1892	\$2,147,782 60
" 1893.....	2,792,969 20
<hr/>	
An increase of.....	645,186 60
<hr/>	

The largest gain is in salmon, smelt and herring, as explained under their respective headings.

SHAD.

While a considerable gain is reported in the Gulf of St. Lawrence districts, a large falling off has taken place in the Bay of Fundy. I can only repeat what I have said before of the necessity of a close time during spawning season to restore this once lucrative fishery.

SALMON.

Of this I may say king of food fishes, the total take is 2,289,297 pounds in 1893, as against 1,179,095 pounds for 1892, a phenomenal increase everywhere except on the Restigouche River, where it was small for reasons which Mr. Verge gives in his report, quoted elsewhere, and which are borne out by the large catch on the coast leading to this river. The streams were not only everywhere full of parent fish this fall during spawning time, but innumerable numbers of parr were observable this season, which together gives assurance of large catches for 1895 and the following years, though that of 1894 may not be quite up to 1893 as grilse were hardly as plentiful this season as last. I am satisfied that more salmon reached the spawning beds in the different streams this fall than for very many years before.

HERRING

Visited the coasts in immense quantities last spring and more than the usual quantities were taken for food, bait, etc.

SMELOTS.

The value of this fishery to the country can scarcely be over-estimated, coming as it does in the winter season, when there is very little other employment. The

quantity taken during the past year has been very large, over three million pounds in excess of that of the previous year, and the weather being favourable better results in every way were secured. Present indications are that the catch for 1894 will exceed even that of 1893.

COD.

The take exceeds that of 1892, notwithstanding the extremely stormy weather during the latter half of August and all of September, when very little fishing could be done. Up to the 15th August the catch was 50 per cent above that of the previous year.

MACKEREL.

These erratic fish were plentiful for a short time and of fine quality, but did not remain on the coasts for so long a period as previous year, consequently fewer were taken, each year less are salted and more shipped in ice or placed in freezers to be forwarded in winter, though a good many are captured for home consumption by persons in small boats all along the coasts.

TROUT.

A very large catch of these fish is reported from all points of the different counties, more attention is given to them than formerly, and, like salmon, better protection both by our guardians and the lessees of the rivers is showing good results.

LOBSTERS.

With more factories, a small increase in the aggregate of these fish is reported, though in some districts where they are certainly overfished, there has been a falling off. In the southern part of my district, packers claim fall fishing, while giving the females a chance to spawn undisturbed, would also give better results to the fishermen. I would like to see it tried.

OYSTERS.

Notwithstanding the winter prohibition of taking through the ice, nearly as many are reported as preceding year, and I believe this regulation will in a short time, especially in Kent County, largely increase the production of the finest oysters we have. A very small portion of the beds on the Miramichi River are raked regularly at all, as the area is immense, and the quality comparatively poor in places especially, but some 10,000 barrels each year are taken therefrom.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS.

RESTIGOUCHE COUNTY.

Overseer J. A. Verge, reporting a slight increase over last years' catch, writes: The weather during the month of June being extremely warm and dry, salmon kept in the deep water, and later reached the rivers in much greater numbers than in preceding years. This dry and warm weather in the early part of the season caused grass and mud to rise and render the nets in the lower tideway unfishable, causing them to be taken up early, while those which remained in at tide head where there is no mud or grass, made very good fishing later in the season. The spawning grounds were well stocked with fish during the fall.

A new industry is developing on the Restigouche River in the smelt fishery. Last winter fifty licenses were issued, five of which were on the New Brunswick side near Dalhousie Junction, though fished only for a few days near the end of the season, made a catch of 22,260 pounds. The regulations were well observed.

GLOUCESTER COUNTY.

Overseer James Hickson reports salmon fishing all along the coast this season better than for many years before. The catch of mackerel has been fair; they are larger than usual, and therefore brought a better price. Cod and herring were plentiful, and with extra expenditure and exertion the take of these fish could be doubled. Lobsters fair in quantity and size; smelt fishing very good.

The anglers report good sport on the river this season, but the largest run of salmon went up after the season closed; there were more fish on the Nipisiguit this fall than for a good many years.

Overseer J. D. Theriault says: Salmon a good increase over last year; spring herring abundant; mackerel came in very plentiful, but rough weather prevented a large catch; lobsters were larger, but scarcely up to the average in numbers; codfish were abundant, but stormy weather last half of the season kept down the catch. The existing regulations were well observed, and are a good protection to the fisheries.

Overseer Joseph L. Hache reports fishing of all kinds fair; believes a regulation as to size of oysters should be made to protect the small ones.

Overseer H. D. Albert, of Caraquette, reports an increase in all the leading kinds of fish in his district, and says abuses occur on the Caraquette and Miscou herring banks by schooners from Nova Scotia and elsewhere, defying the local officers; recommends that a Government cruiser visit these places during the fishing season, by latter part of August and early part of September, otherwise reports regulations well observed.

Overseer Arcade Laundry writes: fishing was fairly good in his district except mackerel, which was below the average; he strongly urges additional lights at Shippegan Gully, to enable the large number of vessels and boats engaged in cod-fishing to make harbour at any time of tide, etc.

Overseer Adolph Ache reports fishing generally good except mackerel, says most of the codfish are exported in British vessels to the Mediterranean; other kinds of fish are shipped to places in the United States and Canada or used for local consumption. No abuses exist, close seasons and regulations have been well observed.

Overseer William Marks, of Miscou, says spring herring were abundant, other fishing fair, except mackerel, which were scarcely up to the average; lobsters were scarcely as plentiful but larger than usual.

Overseer Wm. Walsh reports a fair catch of the different kinds of fish usually taken in his district, except lobsters and mackerel not up to last year; he strongly recommends that close time for alewives commence 20th June, as after that date there is danger of the nets taking sea-trout, also that nets be taken up from twelve o'clock noon on Saturday until noon on Monday; the fish are marketed in Canada, United States, West Indies and Brazil; the regulations have been well observed.

Acting Overseer Oliver Robicheau reports a large catch of all kinds of fish usually taken in his district, except mackerel, and it would have been larger, especially in cod, only for rough weather in August and September; the several close seasons have been strictly observed.

NORTHUMBERLAND COUNTY.

Acting Overseer Ferd Robichaud of Neguac (division No. 1, Northumberland County), writes: all kinds of fishing good, except mackerel; herring very plentiful and large quantities caught; salmon have exceeded the record for past twenty years; bass numerous, attributable to the prohibition for past few years.

Overseer J. G. Williston reports as follows:—The season just passed has been one bearing a bountiful harvest for the fishermen. Salmon were unusually plentiful, and I ascribe the great increase to the method now adopted of special guardians on the spawning grounds.

This fall salmon were unusually plentiful in Bay-du-Vin and Black Rivers. Lobsters were a good catch, and I believe now that the short open season for catching them will bring the lobsters back to what they were in former years.

Smelt has been a good catch, no extension should be allowed after the 15th February.

The oyster fishermen have made good work, the falling off from last year was owing to none being taken through the ice. I believe that in the course of a year or two the fishermen will realize that the new regulation was a wise and judicious one. Bass were very plentiful, the result of the three years prohibition, a regulation, I believe, that saved these fish from entire extermination.

Lobsters are exported to Great Britain, salmon in ice, mackerel, trout, halibut, bass, smelts and eels go to the United States; alewives, smoked herring, oysters, flounders and frost-fish are sent to different parts of Canada, while salted herring, cod, hake, shad, fish-oil, bait, fish manure and fish guano are made use of at home. No abuses exist. I have made a number of seizures in past year, but generally the fishermen are law-abiding. There was only one mill running in my district this year, the owner burned all the saw-dust and rubbish.

Overseer L. H. Abbott reports an increase in all kinds of fish, the largest catch of salmon for at least twenty years. Smelts fair; frost-fish abundant. The close seasons with very few exceptions have been strictly observed.

Overseer Patrick Hogan reports a large catch of salmon, which is the principal fishery in his district; believes the great increase of salmon due to present mode of protection; close season well observed, which allowed immense numbers of fish to reach spawning grounds. Salmon sold in United States.

KENT COUNTY.

Overseer Pierre L. Richards reports fishing of all kinds fair in his district, with salmon and herring exceedingly abundant, complains of saw-dust from the large mills on the Kouchibouguac and Kouchibouguacis Rivers (these are exempt) doing an immense amount of injury to the fisheries.

Overseer W. F. Hannah, of Richibucto, says: I beg to report a general improvement in the fisheries compared with last year, the close seasons have been well observed and no illegal fishing. I find the mill owners careful in observing the saw-dust regulations.

WESTMORELAND COUNTY.

Overseer Robert Goodwin reports a larger increase in take of salmon by shad-net fishermen, which he believes is partly at least attributable to fry placed in north lakes at head of Sackville River three or four years ago, and strongly urges that more be put there next and succeeding years; believes also that Tignish and Port Elgin Rivers might be stocked.

Overseer Denies T. Cormier reports a small catch of shad.

I have the honour to be, sir,
Your obedient servant,

R. A. CHAPMAN,
Inspector of Fisheries.

DISTRICT No. 3.

REPORT ON THE FISHERIES OF DISTRICT No. 3 OF NEW BRUNSWICK,
COMPRISING THE COUNTIES OF VICTORIA, CARLETON, YORK,
SUNBURY, QUEEN'S, KING'S, ST. JOHN AND ALBERT, FOR THE
YEAR 1893, BY INSPECTOR H. S. MILES.

OROMCTO, 31st December, 1893.

Honourable Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith my first annual report of the fisheries of this district, together with a synopsis of the reports of Overseers and tabulated statements giving the kinds, quantities and values of the fishery products for the year just closed, also the kind and values of the material used in the prosecution of the fisheries. Compared with last year, the total catch shows a slight decrease the exact figures being :

1892.	\$192,673 50
1893.	181,969 85
Decrease	<u>10,703 65</u>

SALMON.

There was a slight falling off in the catch of this fish which was due to a less rigorous prosecution of this branch of fishing, but they were never known to be more abundant on the spawning grounds.

SHAD.

There was also a considerable decrease in this fish which was owing to the fact that on account of there being scarcely any freshet the fish left the harbour where the season this year only lasted two weeks.

HERRING.

There was a marked increase in this catch which was due to the scarcity of shad, consequently herring brought a better price than usual, and the men continued to fish for them much longer.

LINE FISH.

The increase in the catch of cod, hake, haddock and halibut was largely owing to the greater number of men engaged in fishing for them.

SARDINES.

This year sardines returned after an absence of several years and were caught in large quantities by the weirs and seines about St. John, and good prices were obtained owing to the scarcity of this fish in the lower part of the bay.

CONSUMPTION OF FISH.

About seventy-five per cent of the entire catch of salmon was exported to the United States. Of alewives and herring about sixty per cent was consumed in

Canada and the balance was shipped to the West Indies, where remunerative prices were obtained. Hake also was exported to the West Indies, while cod, haddock and pollock were used entirely for home consumption. Sardines—Of this fish half was used by local fishermen for lobster baits, and the rest were exported to the canning factories at Eastport, U.S. Shad—The local demand for this fish was far in excess of the supply.

ALBERT COUNTY.

Overseer Stewart reports that there was a decrease in all kinds of fish except salmon. The decrease is owing to the saw-dust and mill refuse being allowed to go into the streams. The increase in the salmon catch was owing to the salmon being more plentiful than in other years. All the fish caught in this district are used for home consumption.

The mill owners are allowed to put their saw-dust and mill refuse in the streams, which has a very injurious effect on the feeding grounds of the fish, and thus destroying the shad fishery in the bay. It is recommended by fishermen that net fishing be not allowed in rough weather. The close seasons have been well observed, each officer doing his duty and rendering efficient protection. Illegal fishing came to my knowledge, and five men were fined by Fishery Inspector H. S. Miles, and the fines collected. The Saw-dust Act is not observed, and a very great injury is done to the fisheries in this district by the dumping of mill refuse into the river. There is only one fish-way in my district, and that is in good repair. This officer recommends that the Saw-dust Act should be enforced in all the streams in his district, that net fishing be prohibited in rough weather, and that no shad should be taken in St. John harbour before spawning.

ST. JOHN COUNTY.

Overseer O'Brien reports a marked increase in the catch of nearly all kinds of fish, particularly alewives, of which not less than seven hundred barrels were caught in a weir which last year did not take more than three hundred barrels in all. He thinks this improvement due to several causes, among which may be mentioned the beneficial results from the strict observance of the weekly close time, the less destruction of the young fish than in former years, and the fact of having had a very slight freshet, permitted the fish to go up the river where they were followed by the harbour fishermen, who succeeded in taking an uncommonly large catch. Owing to the river being so low, the shad quickly left the harbour, and the season only lasting for a couple of weeks, the catch of this fish was much below the average. Owing to wages being low in the coasting trade, a greater number of men than usual were engaged in fishing, and the result was that there was a decided increase in the catch of cod, hake, haddock, pollock and herring. The total yield of this division is \$114,928.

KING'S COUNTY.

Overseer Howlan states that for several years there has been a continued decrease of all kinds of fish in the main streams of his district, which he considers is owing to the log driving. In the brooks trout are found in abundance and are of particularly fine quality. The close seasons are well observed.

Overseer Gray reports that on account of convictions having been made in his district he found the fishermen hostile and unwilling to give correct returns of their catch of fish. Salmon and pickerel were exported, shad and alewives were mostly used for home consumption. He considers the catch an average one. Total yield of this division valued at about \$16,029.

QUEEN'S COUNTY.

Overseer Cass reports an increase in nearly all kinds of fish in his district and a larger catch than usual, which is due in part to more men having been engaged in

fishing. The entire catch, excepting alewives, were used for home consumption. No abuses were known to exist except that the Friday night close time was not always strictly observed. Guardians were employed and as much protection was afforded as possible. No illegal fishing came to his knowledge. The Saw-dust Act was not generally observed and injury to the fishing interest was the result. No fish-ways are in this district. The total yield of this division is \$20,456.

SUNBURY COUNTY.

Overseer Hoben reports a large decrease in nearly all kinds of fish, except pickerel and alewives, but there was such a large increase in those two kinds of fish that on the whole the aggregate was much larger than usual. The prices obtained were somewhat higher than last year, owing to the scarcity of shad in the St. John market. The fishing season was fine and the fishermen were well satisfied with the result of the catch. The officer suspects that the Friday night close time was not always strictly observed, and the Saw-dust Act was not enforced. There are in this division two fish-ways, both of which are practically useless and have never been of any benefit whatever. They should be put in good condition as they are on an important river at the head of which are fine spawning grounds that millions of fish vainly try to reach. Total yield of this division is valued at \$14,489.

YORK COUNTY, NEW BRUNSWICK.

Overseer Orr reports a decrease in the catch of salmon and shad and a great falling off in pickerel; trout about the same as last year; grilse were very plentiful and very large; all the fish caught in this county were used for home consumption. One abuse on the St. John River is drifting on tidal waters, in non-tidal waters the settlers have taken the advantage of the "Shad Law" by fishing four days in the week. The Overseer thinks that the Friday night's close time on the river St. John was not strictly observed. He reports two unsuccessful efforts to catch parties drifting. He made three net seizures for Sunday fishing and the parties were prosecuted by Inspector H. G. Miles. He reports that the Saw-dust Act is not generally observed by mill owners and it is a cause of great complaint. There are no fish-ways in this district. Owing to a general complaint among the anglers, this officer recommends that net-fishing for salmon be prohibited until the 1st of June instead of the 1st of March as at present. A club represented by Mr. T. G. Loggie spent over \$700 in employing guardians to assist the Dominion guardians in the protection of the S. W. Miramichi, thus rendering a very efficient service which it is to be hoped will be continued next year.

REPORT OF FISHERY PROTECTION IN THE SOUTH-WEST MIRAMICHI.

BY RIPARIAN OWNERS.

FREDERICTON, N.B., 1st November, 1893.

The riparian owners of water on the south-west Miramichi have taken an onward step in the season just past by the successful guardianship of their properties on the Miramichi. It has always been a matter of surprise to the writer, since his first visit to this beautiful river, that a fishing stream so valuable should be left almost entirely to the temptation of settlers, who have always looked upon the habit of illegal fishing by net and spear as a privilege that was an inheritance of their fathers. As a consequence, the river year by year was becoming depleted, and the once famous river was fast losing its attraction for sportsmen, who annually frequented there. During the past winter I opened up a correspondence with the Department of Fisheries, Ottawa, with a view of joining in with us in a mutual protection. I am glad to say that with the hearty co-operation of the inspectors, Messrs. Pratt and Chapman, and the influence of Hon. M. Adams, M.P., for North-

umberland, we were enabled to place a chain of daily guardians from tide head near Indiantown to the Forks, a distance of one hundred and ten miles. Sixteen guardians in all were employed; seven from Boiestown down, and nine from Boiestown up; the latter being a distance of fifty miles, where we placed all our own men in company with three of the Dominion guardians, one of whom, Alex. McDonald, was appointed Head Warden, and to whom and the overseer, Robert Orr, a great deal of the success of the protection belongs. The former was constantly moving among the men to see they were alert on their stretches, collecting reports, etc., etc., the latter making periodical visits in the interest of the Government as well as ourselves. I am glad to say that both speak in the highest praises of the work done by the men, and they report only one seizure of a canoe, made by Inspector McDonald and Benjamin Munn near the Forks. This canoe was rigged for spearing, and the owners freely admitted that they intended illegal work, but said they were ignorant of the laws.

The following division of the river was made:—

No. 1. From Forks to Company Line Rapids.....	2	guardians.
No. 2. From Company Line to Burnt Hill.....	2	do
No. 3. From Burnt Hill to Sand Pond.....	2	do
No. 4. From Sand Pond to Boiestown.....	2	do

On stretch No. 1, F. Stancliffe, of Montreal, the lessee of the waters, placed two men; A. H. Wood, of Boston, and the Dominion Government, one man each on stretch No. 2; A. H. Wood and Rocky Bend Club, one man each on stretch No. 3; Messrs. Beckwith and Phair and the Government, one man each on stretch No. 4. Another stretch should be added next year from Forks up the North Branch.

From Boiestown to Tide Head, Mr. Adams placed the guardians most suitable to the river, and Mr. Chapman, the Inspector, who was over the route at different times, reports protection well carried out, specially at Arbo Settlement and Porter Settlement, the two week points on the river. Guarding commenced on the 20th of June, when I visited the river, and hired the men, and continued till November 1st—our men, however, were removed according to arrangements. October the 15th. Here let me say, in future the men should remain guarding till the 1st November. Each of our men were supplied with a book to record their daily service, and all were sworn in and appointed Dominion guardians. These daily reports were sent into me weekly, and I have received in all seven hundred and twenty-three of them; they form an interesting record. As a natural consequence a great deal of correspondence was carried on by myself during the summer, and scarcely a day passed did I not have occasion to pass something through the mails. As a result, necessarily, a good deal of work was placed on myself, all of which I heartily place at the disposal of the anglers, without any expense. I was materially assisted by the advice of Mr. E. Hanson, of the Rocky Bend Club.

Pay of Guardians.—The total amount paid to our six guardians was seven hundred and twenty-eight dollars (\$728.00), and the money was promptly received from the anglers, and as promptly paid to the guardians, their pay being at the rate of one dollar per day with one exception.

Result.—The Head Guardian and Overseer report on November the 1st the river abounded in salmon, and all spawning beds preserved and no spearing or netting carried on during the season. I need only add in conclusion that the good work should be carried on in future, and I may safely say that our fishing would increase four-fold.

Yours obediently,

T. G. LOGGIE.

CARLETON COUNTY.

Guardian Lindsay states that the only mode of fishing in his district is that of "fly surface fishing." There was an abundance of salmon and trout in the streams which for the most part run through unbroken wildernesses, consequently are not

fished as much as they otherwise would be. The law has been well observed this year. Salmon were abundant on the spawning beds. The entire catch which consisted principally of salmon and trout was used for home consumption, and as the greater part of the fishing was done by sportsmen, who make no report, accurate accounts cannot be obtained.

VICTORIA COUNTY.

Overseer Ryan reports only an average catch in his division, yet thinks the fish were in the rivers in greater abundance than usual. None were exported. This overseer urges the necessity of building a fish-pass in the dam across Salmon River. He states that the fishing laws and regulations were well observed. Total yield valued at \$2,365.00.

I have the honour to be, sir,
Your obedient servant,

H. S. MILES,
Inspector of Fisheries.

NEW BRUNSWICK—District No. 1.

Return showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries; Quantity and Value of Fishing Material; Kinds and Quantities of Fish, and the Total Number of Men employed, &c., in District No. 1, of the Province of New Brunswick, for the Year 1893.

Number.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.						KINDS OF FISH.								
	Vessels.			Boats.			Gill-nets.		Weirs.		Seines.		Salmon, fresh, in ice, lbs.	Herring, salted, barrels.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, alive or fresh, tons.	Cod, dried, cwt.	Cod Tongues and Sounds, barrels.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Rathoms.	Value.	Number.	Rathoms.	Value.									Number.	Rathoms.	Value.
Charlotte County.																					
1	St. Andrew's.	..	..	..	76	2280	77	400	400	35	10500	45	1800	1350	..	..	..	39	40	..
2	Ste. Croix.	..	..	..	5	300	15	..	..	5	1200	5	60	75	400	50	..	..	..	..
3	Beaver Harbour.	21	359	7100	92	4185	295	7500	3750	78	14900	78	1745	3450	1550	..	7000	263	466	..	
4	Campanelle.	14	274	5745	62	5404	169	4943	2431	23	9200	24	600	1283	1018	..	258500	21	747	..	
5	Grand Manan.	21	312	7500	70	38100	607	31690	11604	24	24000	26	2600	2600	2225	4373600	4016000	442½	4735	4½	
6	West Isles.	7	94	1500	19	12753	292	5275	1802	74	44068	74	2273	3198	422	38450	5920	179	370	..	
7	St. George.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals.		63	10639	21845	243	63022	1455	49808	19987	239	103868	252	9078	11956	400	5265	4412050	4280420	7006	944½	6358

RETURN showing the Number, Tonnage and Value of Vessels and Boats, engaged in the Fisheries; Quantity and Value of Fishing Material, &c., District No. 1, Province of New Brunswick, for the Year 1893—*Concluded.*

Number.	DISTRICTS.	KINDS OF FISH.												FISH PRODUCTS.						VALUE.				
		Hake, dried, cwt.	Hake sounds, lbs.	Haddock, cwt.	Pollack, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alewives, barrels.	Clams, canned, lbs.	Clams, barrels.	Clams, shelled, lbs.	Squid, barrels.	Sardines, barrels.	Sardines, preserved in cans.	Flounders, lbs.	Tom-cod or Frost-fish, lbs.	Pickarel, barrels.	Fish Oils, galls.		Fish used as bait, barrels.	Fish used as manure, barrels.	Fish Guano, tons.	
<i>Charlotte County.</i>																								
1	St. Andrew's			50	50	4000										1000							30	61,625 00
2	Ste. Croix					4200																		4,439 50
3	Beaver Harbour	4819	4819	920	1419																		10	148,799 80
4	Campobello	13104	14259	6535	2767																			106,593 90
5	Grand Manan	7000	7000	1550	5660																			255,416 00
6	West Isles	3171	1568	1710	3524																			114,023 15
7	St. George					1000																		285 00
Totals.....		28094	27946	10765	13420	9200	71944	5825	130	250000	3276	10536	48	94119	250000	14900	950	2500	35255	8017	2710	40		691,182 35
Home consumption and canned goods not elsewhere specified.																							80,000 00	
Total value.....																							771,182 35	

RECAPITULATION

OF the Yield and Value of the Fisheries, District No. 1, New Brunswick, for the
Year 1893.

Kinds of Fish.	Quantity.	Price.		Value.
		\$	cts.	
Salmon, fresh	Lbs. 400	0	20	80 00
Herring, salt.....	Brls. 5,265	4	50	23,692 50
do frozen.....	Lbs. 4,412,050	0	01	44,120 50
do smoked.....	" 4,280,420	0	02	85,608 40
Alewives.....	Brls. 130	4	50	585 00
Cod.....	Cwt. 6,358	4	50	28,611 00
do tongues and sounds.....	Brls. 4 $\frac{1}{2}$	10	00	45 00
Pollock.....	Cwt. 13,420	3	00	40,260 00
Haddock.....	" 10,765	3	50	37,677 50
Hake.....	" 28,094	3	00	84,282 00
do sounds.....	Lbs. 27,646	0	50	13,823 00
Halibut.....	" 71,944	0	10	7,194 40
Trout.....	" 9,200	0	10	920 00
Frost-fish.....	" 950	0	05	47 50
Flounders.....	" 14,900	0	05	745 00
Smelts.....	" 5,825	0	05	291 25
Pickarel.....	" 2,500	0	05	125 00
Squid.....	Brls. 48	4	00	192 00
Sardines.....	" 94,119	2	00	188,238 00
do canned.....	Cans. 250,000	0	05	12,500 00
Lobsters.....	Tons. 944 $\frac{1}{2}$	80	00	75,560 00
do canned.....	Lbs. 7,000	0	14	980 00
Clams.....	Brls. 3,276	1	25	4,095 00
do shelled.....	Lbs. 10,536	0	05	526 80
do canned.....	" 250,000	0	05	12,500 00
Fish oil.....	Galls. 35,255	0	40	14,102 00
do guano.....	Tons. 40	25	00	1,000 00
do used as bait.....	Brls. 8,017	1	50	12,025 50
do do manure.....	" 2,710	0	50	1,355 00
Total.....				691,182 35
Home consumption, and canned goods not elsewhere specified.....				80,000 00
Total.....				771,182 35

NUMBER and Value of Vessels, Boats, Nets, Weirs, &c., engaged in the Fisheries of District No. 1, New Brunswick, for the Year 1893.

Number.	Materials.	Value.
		\$ cts.
63	Vessels, 1,039 tons	21,845 00
1,121	Boats	63,022 00
49,808	Fathoms of nets	19,987 00
239	Weirs	103,868 00
15,709	Lobster traps	11,716 00
3	do canneries	10,000 00
4	Fish presses	400 00
252	Seines (9,078 fathoms)	11,956 00
1,110	Hand lines	1,502 00
404	Dip nets	2,828 00
691	Trawls	10,142 00
4	Ice houses	1,600 00
824	Smoke and fish houses, with fixtures	127,323 00
10	Steamers and smacks	5,400 00
211	Wharfs and piers	57,826 00
	Total	449,415 00

RETURN showing the Number, Tonnage and Value of the Vessels and Boats engaged in the Fisheries; Quantity and Value of Fishing Material; Kinds and Quantities of Fish, and the Total Number of Men employed, &c., in District No. 2, Province of New Brunswick, for the year 1893.

FISHING VESSELS AND BOATS.				FISHING MATERIAL.				KINDS OF FISH.														
DISTRICTS.	Vessels.				Boats.		Gill-nets.		Trap-nets.		Salmon, fresh in ice, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved (in cans), lbs.	Lobsters, preserved in cans.	Lobsters, alive or fresh, tons.	Cod, dried, cwt.	Number.	
	No.	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.												
<i>Restigouche County.</i>																						
1	Tide Head to Dalhousie				32	640	32	7730	7730			52380								4	1	
2	Dalhousie to Balletune				110	2150	165	18020	12000			142000	20000	2300	50000	120		64500	3	150		
Totals.					142	2790	197	25750	19730			194380	20000	2300	50000	120		64500	7	150		
Value												38876	3000	10350	1000	1680		9030	280	675		
<i>Gloucester.</i>																						
1	Petit Rocher				350	5600	600	15000	10000			115600	400	6250	110000		370	25000	63000		3442	
2	Bathurst, &c.				250	4000	450	22000	16000			970410	2700	7100		285	30400	140000		6000		
3	Grand Anse	1	24	400	3	3800	406	6500	3800	2	6000	65000	3500	3500		1200	49550	109000		2090		
4	Upper Caraquet	3	43	2000	10	8500	125	2450	1850				2500	2500		450				5300		
5	Caraquet	70	947	32700	247	71	9500	220	14600	6500			12058			172	2400	148200	4	22300		
6	Shippegan (Mainland)	13	131	5150	39	65	4100	135	3550	2050		7500	1000	2122	5000	313	4675	51250	3	4082		
7	Shippegan (Island)	37	433	2200	124	122	8650	284	8350	3500			4180			1127	4150	208300		10060		
8	Miscou and Little Shippegan	1	13	300	3	80	2400	166	2000	1000		7080	1920	2830		160	70000	250000		4000		
9	Pokemouche (Parish of Inkerman)	2	25	1500	6	160	4000	250	23500	7600		18230	13500	2600	16300	525	30000	9600		1450		
10	Tracadie (Parishes of Saumarez and St. Isidore)	6	75	2380	20	125	3860	250	15000	5170		25400	1440	12500		165	25000	62000		1710		
Totals.		133	1711	46930	452	1487	54410	2886	112950	57470	2	6000	20960	55140	126300	5000	4767	241175	1043850	7	60434	
Value												241844	3144	248130	2526	100	66738	28941	146139	280	271953	

NEW BRUNSWICK—District No. 2—Continued.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

District.	KINDS OF FISH.													FISH PRODUCTS.					TOTAL VALUE.	Numbers.				
	Cod, Tongues and Sounds, barrels.	Hake, dried, cwt.	Hake, Sounds, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bass, lbs.	Alewives, barrels.	Oysters, barrels.	Clams, barrels.	Eels, barrels.	Shad, barrels.	Squid, barrels.	Flounders, lbs.	Tom-cod or Frost- fish, lbs.	Coarse and Mixed Fish, barrels.	Fish Oils, gallons.			Seal-skins, No.	Fish used as bait, barrels.	Fish used as man- ure, barrels.	
<i>Restigouche County.</i>																								
1 Tide Head to Dalhousie	5000	22300	2000	1000	100	100	700	1000	1	
2 Dalhousie to Belledune	10	5000	28000	500	40	1000	100	100	700	1000	2	
Totals	10	10000	50300	500	2040	1000	100	100	700	1000	2	
Value \$	30	1000	2515	50	20400	50	200	40	1050	500	90726	
<i>Gloucester.</i>																								
1 Petit Rocher . . . . .	.....	300	370	.....	2000	.....	6000	500	.....	.....	.....	.....	.....	.....	10000	2000	.....	1400	.....	1330	5220	1
2 Bathurst, &c. . . . .	.....	400	400	.....	5000	.....	250000	4500	.....	.....	350	75	.....	.....	.....	150000	.....	800	.....	1600	2800	2
3 Grand Anse . . . . .	.....	287	250	150	1500	.....	11500	.....	.....	.....	200	.....	26	50	.....	.....	.....	1000	.....	3000	1800	3
4 Upper Caraquet	5	546	998	300	1000	2000	12000	1000	730	.....	300	20	.....	25	.....	6000	100	2700	.....	1500	1500	4
5 Caraquet . . . . .	.....	901	1400	.....	1000	97920	41000	.....	1700	.....	1630	72	.....	231	.....	31500	.....	10525	.....	3894	7880	5
6 Shippegan (Mainland). . . . .	.....	497	400	290	.....	2050	107800	4800	20	.....	528	19	13	.....	2000	2900	100	1200	.....	1620	1978	6
7 Shippegan (Island). . . . .	.....	.....	.....	.....	.....	10400	16800	.....	.....	.....	2310	.....	10	.....	.....	.....	.....	4650	.....	2700	2100	7
8 Miscou and Little Ship- pegan . . . . .	.....	200	300	.....	.....	7000	53000	7000	.....	.....	50	50	.....	.....	2000	3000	.....	1500	1	5000	1500	8
9 Pokenouche (Parish of Inkerman).	7	120	120	50	2000	1500	110000	1500	1260	.....	120	60	.....	.....	1500	4000	100	1200	.....	560	4000	9
10 Tracadie (Parishes of Saumarez and St. Isidore). . . . .	.....	445	450	.....	2200	2500	136000	1200	1500	.....	120	150	.....	15	1200	1500	.....	1500	1	1500	500	10
Totals	12	3690	4688	790	15200	123370	744100	20500	2760	2450	5618	446	49	321	16700	200900	300	26475	2	22704	29278	1187,193		
Value \$	120	11070	2344	2765	1520	12337	37205	2050	12420	7350	11216	4460	490	1284	835	1045	600	10590	2	34056	14639	1,187,193		

NEW BRUNSWICK—District No. 2.—Continued.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.		KINDS OF FISH.										Numbers.			
	Vessels.			Boats.			Gill-nets.		Salmon, salted, brls.	Salmon, fresh in ice, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved in cans, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, alive or fresh, tons.		Cod, dried, cwt.	Cod, Tongues and Sounds, brls.	
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.														Value.
<i>Northumberland Co.</i>																						
1	Neguac, Tabusintac, &c.	140	3600	200	40000	28000	205800	5060	5000	25000	200	4000	58600	1	510							
2	Bay du Vin, Escuminac, &c.	6	5190	474	60000	60000	185230	3000	3000	20000	400	14000	144720	2	200							
3	Chatham, Newcastle, &c.	215	6450	40	150	3000	250	21200	16200	200000	318	25000		170	20000							
4	North-west Branch Miramichi River	30	360	30	2400	1600	70000															
5	South-west Branch Miramichi River	50	600	50	3000	2500	68427	1980														
Totals.		11	280	8250	46	559	12750	1004	126600	108300	84	729457	1980	30000	45000	770	38000	203320		1184		
Value.											1344	145891	396	37701	600	900	10780	4560	28465		5328	
<i>Kent Co.</i>																						
1	Harcourt, &c.	5	200	10			1000															
2	St. Louis and Carleton	300	8000	450	12000	6500	52000	6000														
3	Richibucto and Weldford	200	8840	360	18570	7400	22500	8600														
4	Buctouche, including Parishes of Wellington and St. Mary's.	250	7500	450	20000	6000	1000	8000														
5	Cocagne, Parish of Dundas.	215	4500	400	12500	5000		7500														
Totals.		1	10	400	3	970	29040	1670	63070	24900	25	75500	1000	30100		50000	4656	81000	1148000	11	4130	16
Value.											400	15100	200	135450		1000	65184	9720	160720	440	18585	160

NEW BRUNSWICK—District No. 2—Continued.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

DISTRICTS.	KINDS OF FISH.												FISH PRODUCTS.					TOTAL VALUE.	Numbers.		
	Hake, dried, cwt.	Hake, Sounds, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bass, lbs.	Alewives, brls.	Oysters, brls.	Clams, brls.	Eels, brls.	Shad, brls.	Flounders, lbs.	Tom-cod or Frost- fish, lbs.	Coarse and mixed fish, brls.	Fish Oils, galls.	Fish used as Bait, brls.			Fish used as Ma- nure, brls.	Fish guano, tons.
<i>Northumberland Co.</i>	250	300	...	3000	1200	410720	24000	360	600	100	100	50	14000	80000	500	1500	1500	1200	...	cts.	Numbers.
	400	400	...	2000	1000	476900	50000	450	8000	...	50	150	25000	314000	...	500	3000	1570	350	116835 00	1
	...	...	...	3000	...	1200000	30000	500	450	...	120	250	200000	600000	...	100	150	600	...	170041 80	2
	...	...	...	20000	...	...	110000	875	...	...	95	120	...	...	...	...	...	...	...	160009 00	3
	...	...	...	5920	...	...	...	1640	...	...	...	...	...	...	...	...	...	...	...	33087 50	4
Totals.....	650	700	...	33920	2200	2087620	214000	4025	9050	100	365	570	239000	994000	500	2100	4650	3370	350	23397 40	5
Value.....\$	1950	350	...	3392	220	104381	21400	18112	27150	200	3650	5700	11950	49700	1000	840	6975	1685	8750	503870 70	...
<i>Kent Co.</i>	...	...	...	8000	...	...	6000	...	...	...	15	...	...	...	...	...	...	...	...	2150 00	1
	1200	1200	...	5000	...	480000	25000	1500	200	100	200	125	10000	50000	1200	1750	3000	2000	...	156340 00	2
	2720	3200	...	3850	4650	1750000	3500	2600	515	100	180	20	21000	24000	1250	1550	2800	...	...	251399 00	3
	450	400	...	4000	500	870000	3900	2700	3200	500	170	50	20000	40000	...	1500	3800	...	...	179620 00	4
	200	...	100	4100	...	186000	5000	900	800	200	300	50	4000	40000	...	500	2500	...	...	103895 00	5
Totals.....	4570	4800	100	24950	5350	3286000	43400	7700	4715	900	865	245	55000	154000	2450	5300	12100	2000	...	...	...
Value.....\$	13710	2400	350	2495	535	164300	4340	34650	14145	1800	8650	2450	2750	7700	4900	2120	18150	1000	...	693404 00	...

NEW BRUNSWICK—District No. 2—Continued.
 RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Numbers.	DISTRICT.	FISHING VESSELS AND BOATS.				FISHING MATERIAL.		KINDS OF FISH.									
		Boats.		Men.	Rathoms.	Gill-nets.	Value.	Salmon, fresh, in ice, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved in cans, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, alive or fresh, tons.	Cod, dried, cwt.	Hake, dried, cwt.
		No.	Value.														
1	Westmorland County.																
2	Shediac and Botsford, including Moncton and Salisbury.	725	18,000	1,400	18,000		\$ 7,500	3,000	17,000	30,000	24,000	260	16,000	906,700	100	150	100
3	Westmoreland and Sackville.	38	1,080	67	6,000		2,000	2,000	450	32,000	30,000		2,000		4		
	Dorchester.	33	750	75	7,000		2,000	10,000	40								
	Totals.	798	19,830	1,542	31,000		11,500	15,000	17,490	62,000	54,000	260	18,000	906,700	104	150	100
	Value.							3,000	78,705	1,240	1,080	3,640	2,160	126,938	4,160	675	300

NEW BRUNSWICK—District No. 2—Continued.
 Return showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Numbers.	District.	KINDS OF FISH.											FISH PRODUCTS.		TOTAL VALUE.	
		Trout, lbs.	Smelts, lbs.	Bass, lbs.	Alewives, brls.	Oysters, brls.	Clams, brls.	Eels, brls.	Shad, brls.	Squid, brls.	Flounders, lbs.	Tom-cod or Frost-fish, lbs.	Coarse and mixed fish, brls.	Fish Oils, galls.		Fish used as bait, brls.
	<i>Westmoreland County.</i>															% cts.
1	Shediac and Botsford, including Moncton and Salisbury.....	9,000	870,000	2,800	1,600	150	210	175			20,000	30,000			11,500	290,103 00
2	Westmoreland and Sackville.....	2,100	65,500	2,200	265		10	360	400	50		2,200	60		2,200	20,312 50
3	Dorchester.....	2,000						30	500			2,000			200	7,860 00
	Totals.....	13,100	935,500	5,000	1,865	150	220	565	900	50	20,000	34,200	60	700	13,700	
	Value.....	\$ 1,310	46,775	500	8,392	450	440	5,650	9,000	200	1,000	1,710	120	280	20,550	318,275 50

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 2, New Brunswick,
for the year 1893.

Kinds of Fish.		Quantity.	Price.		Value.
			\$	cts.	\$ cts.
Salmon, salted	Brls.	109	16	00	1,744 00
do fresh	Lbs.	2,223,557	0	20	444,711 40
do in cans	"	40,960	0	15	6,144 00
do smoked	"	2,980	0	20	596 00
Herring	Brls.	113,408	4	50	510,336 00
do fresh	Lbs.	218,300	0	02	4,366 00
do smoked	"	204,000	0	02	4,080 00
Mackerel	Brls.	10,573	14	00	148,022 00
do fresh or in cans	Lbs.	378,175	0	12	45,381 00
Lobsters	Cans.	3,366,370	0	14	471,291 80
do	Tons.	129	40	00	5,160 00
Cod	Cwt.	66,048	4	50	297,216 00
do tongues and sounds	Brls.	28	10	00	280 00
Hake	Cwt.	9,020	3	00	27,060 00
do sounds	Lbs.	10,188	0	50	5,094 00
Haddock	Cwt.	890	3	50	3,115 00
Trout	Lbs.	97,170	0	10	9,717 00
Halibut	"	130,920	0	10	13,092 00
Smelts	"	7,103,520	0	05	355,176 00
Bass	"	283,400	0	10	28,340 00
Alewives	Brls.	16,350	4	50	73,575 00
Oysters	"	16,365	3	00	49,095 00
Clams	"	6,828	2	00	13,656 00
Eels	"	4,281	10	00	42,810 00
Shad	"	1,764	10	00	17,640 00
Squid	"	371	4	00	1,484 00
Flounders	Lbs.	330,700	0	05	16,535 00
Frost-fish	"	1,384,100	0	05	69,205 00
Coarse fish	Brls.	3,410	2	00	6,820 00
Fish oil	Galls.	34,675	0	40	13,870 00
Seal-skins	Each.	2	1	00	2 00
Fish, as bait	Brls.	53,854	1	50	80,781 00
do manure	"	35,648	0	50	17,824 00
do guano	Tons.	350	25	00	8,750 00
Total					2,792,969 20

NUMBER and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries in District No. 2, New Brunswick, for the year 1893.

Material.	Value.	Total.
	\$ cts.	\$ cts.
145 vessels (aggregate tonnage, 2,001).....	55,280 00	
3,954 boats.....	118,820 00	
359,370 fathoms of net.....	221,900 00	
1,574 smelt nets.....	59,740 00	
2 mackerel nets.....	6,000 00	
		461,740 00
196,200 lobster traps.....	155,000 00	
218 lobster factories.....	168,150 00	
		323,150 00
4 general canneries.....	4,000 00	
104 freezers and ice-houses.....	59,800 00	
371 fish and smoke-houses.....	21,500 00	
24 piers and wharfs.....	4,550 00	
49 steamers and smacks.....	17,300 00	
200 trawls.....	4,250 00	
		111,400 00
Total.....		896,290 00

NEW BRUNSWICK—District No. 3.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, Quantity and Value of Fishing Material, Kinds and Quantities of Fish, and the Total Number of Men employed, &c., in District No. 3, of the Province of New Brunswick, for the Year 1893.

COUNTIES.	FISHING VESSELS AND BOATS.					FISHING MATERIAL.					KINDS OF FISH.					Number.			
	Vessels.			Boats.		Gill-nets.		Weirs.		Seines.		Salmon, fresh in ice, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, barrels.	Herring, fresh or frozen, lbs.		Herring, smoked, lbs.		
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	No.	Value.							Fathoms.	No.	Value.	Fathoms.	No.	Value.
1 Victoria					35	\$ 350	60	200	200		\$ 200			5500					1
2 Carleton					46	920	96	500	250		250			8200					2
3 York					96	2072	257	4300	3250		3250			10200					3
4 Sunbury					86	860	142	4050	2000		2000			240					4
5 Queen's	1	10	120	4	297	4558	523	20580	6995		6995			3608					5
6 King's	1	12	150	4	78	780	116	3800	1900		1900			18900	245				6
7 St. John	16	320	6400	75	260	10400	520	76000	57000	28	8400			136200	2800				7
8 Albert					5	500	10							12400		5	500	500	8
(Grand totals	18	342	6670	83	903	20440	1724	109430	71595	33	8800	4	1125	250	195248	245	2805	500	600500

NEW BRUNSWICK—District No. 3.—Continued.

Return showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Number.	COUNTIES.	KINDS OF FISH.												FISH PRODUCTS.		Total Value.	Number.			
		Lobsters, alive or fresh, tons.	Cod, dried, cwt.	Cod, tongues and sounds, barrels.	Hake, dried, cwt.	Haddock, cwt.	Pollock, cwt.	Trout, lbs.	Hallbut, lbs.	Smelts, lbs.	Alwives, barrels.	Eels, barrels.	Shad, barrels.	Sardines, barrels.	Pickarel, lbs.			Coarse and Mixed Fish, barrels.	Fish Oils, gallons.	Fish used as bait, lbs.
1	Victoria.....	.....	.....	.....	.....	.....	6000	.....	.....	.....	.....	20	.....	9000	105	.....	.....	.....	2,665 00	1
2	Carleton .....	.....	.....	.....	.....	.....	21000	.....	.....	.....	.....	50	.....	.....	.....	.....	.....	.....	4,270 00	2
3	York .....	.....	.....	.....	.....	.....	23700	.....	.....	.....	3	.....	.....	8000	45	.....	.....	.....	5,065 00	3
4	Sunbury .....	.....	.....	.....	.....	.....	690	.....	2455	85	.....	.....	.....	49500	.....	.....	.....	.....	14,489 50	4
5	Queen's .....	.....	.....	.....	.....	.....	1600	.....	2515	667	.....	.....	.....	30300	24	.....	.....	.....	20,456 10	5
6	King's .....	.....	.....	.....	.....	.....	1300	.....	1540	5	350	.....	.....	32000	1	.....	.....	.....	16,029 75	6
7	St. John	140	800	14	4000	1800	250	1000	1700	90	2000	2000	.....	.....	.....	.....	120	2000	114,928 00	7
8	Albert .....	.....	20	.....	.....	.....	2400	.....	20	.....	119	.....	.....	.....	5	.....	20	.....	4,066 50	8
Grand totals.....		140	820	14	4000	1800	250	56690	1000	20	8210	110	3291	2000	128800	180	140	2000	181,969 85	

RECAPITULATION

OF the Yield and Value of the Fisheries in District No. 3, New Brunswick,
for the Year 1893.

Kinds of Fish.	Quantity.	Price.		Value.
		\$	cts.	\$ cts.
Salmon, fresh, in ice.....	Lbs. 195,248	0	20	39,049 60
do in cans.....	“ 245	0	15	36 75
Herring, salt.....	Brls. 2,805	4	50	12,622 50
do frozen.....	Lbs. 500	0	02	10 00
do smoked.....	“ 600,500	0	02	12,010 00
Lobsters, alive or fresh.....	Tons. 140	40	00	5,600 00
Cod, dried.....	Cwt. 820	4	50	3,690 00
do tongues and sounds.....	Brls. 14	10	00	140 00
Hake, dried.....	Cwt. 4,000	3	00	12,000 00
Haddock.....	“ 1,800	3	50	6,300 00
Pollock.....	“ 250	3	00	750 00
Trout.....	Lbs. 56,690	0	10	5,669 00
Halibut.....	“ 1,000	0	10	100 00
Smelts.....	“ 20	0	05	1 00
Alewives.....	Brls. 8,210	4	50	36,945 00
Eels.....	“ 110	10	00	1,100 00
Shad.....	“ 3,291	10	00	32,910 00
Sardines.....	“ 2,000	1	50	3,000 00
Pickarel.....	Lbs. 128,800	0	05	6,440 00
Coarse and mixed fish.....	Brls. 180	3	00	540 00
Fish oil.....	Galls. 140	0	40	56 00
Fish used for bait.....	Brls. 2,000	1	50	3,000 00
Total.....				181,969 85

NUMBER and Value of Vessels, Boats, Nets, Weirs, Wharfs and Piers engaged in
the Fisheries of District No. 3, New Brunswick.

Material.	Value.	Total.
	\$ cts.	\$ cts.
18 vessels (342 tons).....	6,670 00	
903 boats.....	20,440 00	
109,430 fathoms of nets.....	71,595 00	
33 weirs.....	8,800 00	
4 seines (1,125 fathoms).....	250 00	107,755 00
14 ice houses.....	2,000 00	
18 smoke and fish houses and fixtures.....	14,375 00	
10 steamers and smacks.....	6,000 00	
50 trawls.....	500 00	
50 wharfs and piers.....	12,700 00	35,575 00
Total value of materials.....		143,330 00

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

KINDS OF FISH.																			
COUNTIES.		Herring, salted.	Herring, fresh or frozen.	Herring, smoked.	Mackerel, salted.	Mackerel, fresh or pre- served, in cans.	Lobsters, preserved, in cans.	Lobsters, alive or fresh.	Cod, dried.	Cod Tongues and Sounds.	Hake, dried.	Hake Sounds.	Haddock.	Pollock.	Trout.	Halibut.	Smelts.	Bass.	Number.
		Brls.	Lbs.	Lbs.	Brls.	Lbs.	Lbs.	Tons.	Cwt.	Brls.	Cwt.	Lbs.	Cwt.	Cwt.	Lbs.	Lbs.	Lbs.	Lbs.	
1	Restigouche.....	2,300	50,000	50,000	120	241,175	64,500	7	150	...	10	...	...	...	10,000	...	50,300	500	1
2	Gloucester.....	55,140	126,300	5,000	4,767	241,175	1,043,850	7	60,434	12	3,690	4,688	790	...	15,200	123,370	744,100	20,500	1
3	Northumberland.....	8,378	30,000	45,000	770	38,000	203,320	...	1,184	...	650	700	...	...	33,920	2,200	2,087,620	214,000	3
4	Kent.....	30,100	...	50,000	4,656	81,000	1,148,000	11	4,130	16	4,570	4,800	100	...	24,950	5,350	3,286,000	43,400	4
5	Westmoreland.....	17,490	62,000	54,000	260	18,000	906,700	104	150	...	100	...	...	...	13,100	...	335,500	5,000	5
6	Albert.....	5	500	500	...	...	...	140	20	...	4,000	...	1,800	250	2,400	...	20	...	6
7	St. John.....	2,800	600,000	600,000	...	...	...	...	800	14	...	...	...	...	1,300	1,000	...	...	7
8	King's.....	...	...	...	...	...	...	...	...	...	...	...	...	...	1,600	...	...	...	8
9	Queen's.....	...	...	...	...	...	...	...	...	...	...	...	...	...	680	...	...	...	9
10	Sunbury.....	...	...	...	...	...	...	...	...	...	...	...	...	...	23,700	...	...	...	10
11	York.....	...	...	...	...	...	...	...	...	...	...	...	...	...	21,000	...	...	...	11
12	Carleton.....	...	...	...	...	...	...	...	...	...	...	...	...	...	6,000	...	...	...	12
13	Victoria.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13
14	Charlotte.....	5,265	4,412,050	4,280,420	...	...	7,000	944½	6,358	4½	28,094	27,646	10,765	13,420	9,200	71,944	5,825	...	14
Totals.....		121,478	4,630,850	5,084,920	10,573	378,175	3,373,370	1,213½	73,226	46½	41,114	37,834	13,455	13,670	163,060	203,864	7,109,365	283,400	

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Number.	COUNTIES.	KINDS OF FISH.										FISH PRODUCTS.					Total Value.	Number.		
		Alewives.	Oysters.	Clams.	Bels.	Shad.	Squid.	Sardines.	Pickarel.	Flounders.	Tom-cod or Frost-fish.	Coarse and Mixed Fish.	Fish Oils.	Seal-skins.	Fish used as bait.	Fish used as manure.			Fish guano.	
		Brls.	Brls.	Brls.	Brls.	Brls.	Brls.	Brls.	Lbs.	Lbs.	Lbs.	Galls.	No.	Brls.	Brls.	Brls.	Tons.	\$	cts.	
1	Restigouche.				2,040						1,000	100			700	1,000		90,726	00	1
2	Gloucester.	2,760	2,450	5,608	446	49	321		16,700	200,900	300	26,475	2		22,704	29,278		1,187,193	00	2
3	Northumberland	4,025	9,050	100	365	570			239,000	994,000	500	2,100			4,650	3,370	350	503,370	70	3
4	Kent.	7,700	4,715	900	865	245			55,000	154,000	2,450	5,300			12,100	2,000		693,404	00	4
5	Westmoreland	1,865	150	220	565	900	50		20,000	34,200	60	700			13,700			318,275	50	5
6	Albert.					119					5	20						4,066	50	6
7	St. John.	1,700			90	2,000		2,000				120			2,000			114,928	00	7
8	King's.	1,540			5	350			32,000		1							16,029	75	8
9	Queen's.	2,515				667			30,300		24							20,456	10	9
10	Sinbury	2,455				85			49,500		45							14,489	50	10
11	York.				12				8,000									5,065	00	11
12	Carleton.				3	50												4,270	00	12
13	Victoria.					20			9,000		105							2,665	00	13
14	Charlotte.	130		3,276			48	94,119	2,500	14,900	950		35,255		8,017	2,710	40	*771,182	35	14
	Totals.	24,690	16,365	10,104	4,391	5,055	419	96,119	131,300	345,600	1,385,050	3,590	70,070	2	63,871	38,358	390	3,746,121	40	

*Including home consumption, not elsewhere specified.

RECAPITULATION.

Of the Yield and Value of the Fisheries of the whole Province of New Brunswick, for the Year, 1893.

Kinds of Fish.	Prices.	Quantity.	Value.	Total Value.
	\$ cts.		\$ cts.	\$ cts.
Salmon, salted..... Brls.	16 00	109	1,744 00	
do fresh..... Lbs.	0 20	2,419,205	483,841 00	
do canned..... "	0 15	41,205	6,180 75	
do smoked..... "	0 20	2,980	596 00	492,361 75
Herring, salted..... Brls.	4 50	121,478	546,651 00	
do fresh..... Lbs.		4,630,850	48,496 50	
do smoked..... "	0 02	5,084,920	101,698 40	696,845 90
Mackerel, salted..... Brls.	14 00	10,573	148,022 00	
do fresh or preserved in cans..... Lbs.	0 12	387,175	45,381 00	193,403 00
Lobsters, preserved in cans..... "	0 14	3,373,370	472,271 80	
do alive or fresh..... Tons.		1,213½	86,320 00	558,591 80
Cod, dried..... Cwt.	4 50	73,226	329,517 00	
do tongues and sounds..... Brls.	10 00	46½	465 00	329,982 00
Hake, dried..... Cwt.	3 00	41,114	123,342 00	
do sounds..... Lbs.	0 50	37,834	18,917 00	142,259 00
Haddock..... Cwt.	3 50	13,455		47,092 50
Pollock..... "	3 00	13,670		41,010 00
Trout..... Lbs.	0 10	163,060		16,306 00
Halibut..... "	0 10	203,864		20,386 40
Smelts..... "	0 05	7,109,365		355,468 25
Bass..... "	0 10	283,400		28,340 00
Alewives..... Brls.	4 50	24,690		111,105 00
Oysters..... "	3 00	16,365		49,095 00
Clams..... "		10,104	17,751 00	
do canned..... Lbs.	0 05	250,000	12,500 00	
do shelled..... "	0 05	10,536	526 80	30,777 80
Eels..... Brls.	10 00	4,391		43,910 00
Shad..... "	10 00	5,055		50,550 00
Squid..... "	4 00	419		1,676 00
Sardines..... "		96,119	191,238 00	
do preserved in cans..... Cans.	0 05	250,000	12,500 00	203,738 00
Pickarel..... Lbs.	0 05	131,300		6,565 00
Flounders..... "	0 05	345,600		17,280 00
Frost-fish or tom-cod..... "	0 05	1,385,050		69,252 50
Coarse Fish..... Brls.		3,590		7,360 00
Fish Oils..... Galls.	0 40	70,070		28,028 00
Seal-skins..... No.	1 00	2		2 00
Fish, bait..... Brls.	1 50	63,871		95,806 50
do manure..... "	0 50	38,358		19,179 00
do guano..... Tons.	25 00	390		9,750 00
Home consumption not itemized.....				80,000 00
Total for 1893.....				3,746,121 40
Total for 1892.....				3,203,922 00
Increase.....				542,199 40

STATEMENT of the Number and value of Vessels, Boats, Nets, &c., engaged in the Fisheries of **New Brunswick**, with approximate value of other material for 1893.

Articles.	Value.	Total Value.
	\$	\$
226 vessels, 3,382 tons.....	83,795	
5,978 boats.....	202,282	
518,608, fathoms of gill-nets.....	313,482	
256 seines; 10,203 fathoms.....	12,206	
272 weirs.....	112,668	
2 trap-nets.....	6,000	
		730,433
211,909 lobster traps.....	166,716	
221 lobster canneries.....	178,150	
		344,866
1,574 smelt-nets.....	59,740	
404 dip-nets.....	2,828	
1,110 hand-lines.....	1,502	
941 trawls.....	14,892	
4 general canneries.....	4,000	
4 fish presses.....	400	
122 freezers and ice houses.....	63,400	
1,213 smoke and fish houses.....	163,198	
69 steamers and smacks.....	28,700	
285 piers and wharfs.....	75,076	
		413,740
Total.....		1,489,039

APPENDIX No. 7.

PRINCE EDWARD ISLAND.

REPORT ON THE FISHERIES OF PRINCE EDWARD ISLAND FOR 1893,
BY FISHERY OFFICER A. LORD.

CHARLOTTETOWN, P. E. ISLAND, 31st December, 1893.

Hon. Sir CHARLES HIBBERT TUPPER, K.C.M.G.
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report of the fisheries of the province of Prince Edward Island for the year 1893, together with tabulated returns showing kinds, quantities and values of fish caught, also estimated values of material employed in the fisheries during the year. The value of the catch shows a decrease as compared with the year 1892 of \$46,488.48, as follows:—

Total value of P. E. I. fisheries	1892.....	\$	1,179,856	68
do do do	1893.....		1,133,368	26
Decrease		\$	46,488	42

Some of the principal branches, such as mackerel, hake and oysters show large decreases, while herring, lobsters, smelts, &c., exhibit considerable increases. The stormy season had a great influence on the catch, closing up the fishery on several parts of the coast a month earlier than usual. Herring were plentiful and the returns show a large increase over last year. Lobsters also show a considerable increase, but this is chiefly due to the fifteen days additional fishing on a great part of the coast, as well as to the unrestricted canning of all sizes and kinds of lobsters, allowed by the regulations of 5th of April last. Ground fish such as cod, hake, haddock, &c., exhibit in the aggregate a large decrease, very materially reducing the returns for the year. Oysters also show a large falling off, the quantity shipped being 3,310 barrels less than in 1892.

Fishing for smelts was actively prosecuted, and a considerable increase is noted, but the catch though large was not sufficient to compensate for the falling off in the other branches.

The fisheries of Prince Edward Island for 1893 may be summarized as follows, herring 80 per cent increase, mackerel 35 per cent decrease, lobsters 12 per cent increase, cod about the same as last year, hake 66 per cent decrease, smelts 250 per cent increase, oysters 15 per cent decrease, minor fisheries about the same as last season.

In my preliminary report sent to the department a short time ago I dealt pretty fully with the general condition of the fisheries, but details, not touched upon then, are given under the respective headings in this report.

HERRING.

This fish strikes inshore immediately after the ice breaks up in the spring and is taken in large quantities at all points around the coast. The schools resort to coves and estuaries to spawn, and are fished with gill-nets for about one month.

The product is of no great commercial value being chiefly used as bait in the other fisheries. The catch was very large this season, being 20,047 barrels in excess of 1892. Out of this abundance, fishermen had no difficulty in securing an ample

supply of bait, as well as to cure a sufficient quantity of the best fish for home consumption. This fishery, while only of secondary importance at present, might become of great value, if proper methods of curing and packing were adopted.

LOBSTERS.

This fishery was vigorously prosecuted, and the product shows an increase of 349,102 pounds over 1892. This increase however was not caused by any improvement in the fishery, but by the employment of an increased number of traps, as the following table will show:—

Year.	Quantity Canned.	Number of Traps used.	Product Per trap.
	Lbs.		Lbs.
1889.....	2,000,947	77,000	26 $\frac{5}{8}$
1890.....	2,416,794	95,725	25 $\frac{1}{8}$
1891.....	3,670,414	138,000	26 $\frac{1}{2}$
1892.....	2,819,572	213,847	13 $\frac{1}{4}$
1893.....	3,168,674	215,000	14 $\frac{3}{4}$

It will thus be seen that the product per trap has fallen off from 26 $\frac{5}{8}$ one pound cans in 1889 to 14 $\frac{3}{4}$ one-pound cans in 1893. This would indicate that the ground is being over-fished and that the fishery has almost ceased to be remunerative. The regulation of the 5th April last, requiring the two lowest laths on each side of the traps to be placed one inch and a quarter apart, was fairly well observed by packers and fishermen, but did not seem to afford any protection to the small lobsters. It is asserted by practical men that the trap as arranged by the regulation of 5th April was more destructive of small lobsters than that heretofore in use. The quantity of small lobsters and lobsters bearing ova canned during the season was very large, and if continued for any length of time it is evident that the industry must be abandoned.

The worst feature of this trap regulation was the taking the control off the factories and placing it on the traps, rendering it necessary for the officers to examine each trap after being in use before declaring it illegal. To examine the large number of traps in use around the coast of this province was a work beyond the power of the few guardians employed, and all that could actually be done was to enforce the close season as strictly as possible. This was also made difficult by the fact that the guardians under the new regulations were not required to visit the factories during the period of canning, and not being acquainted with the operations could not identify them when required as witnesses against parties who were prosecuted for violation of the close season.

A few small packers on the south side of the island attempted canning in the close season, several of them were convicted and paid the penalty imposed by law, while others escaped owing to difficulty experienced in securing evidence against them.

The fact of the size, limit, and the regulation prohibiting the canning of berried lobsters being abolished, no doubt led them to believe that they could violate the close season with impunity and made it difficult for the officers to control them.

MACKEREL.

This fishery shows a falling off of 7,621 barrels. The decrease, however, was not caused by a scarcity of fish but by the stormy weather prevailing towards the close of the season. Mackerel were plentiful in the months of June and July, and good catches were made at all the important stations.

August, however, proved windy, and consequently detrimental to the fishery; a severe storm about the middle of the month completely broke it up and very little was done after that time.

The greatest falling off occurred in Prince County, on that part of coast extending from Cascumpec to Tignish, and North Cape to West Point. The fishery was fairly successful in King's and Queen's counties, but the catch generally is below the average.

COD.

The cod fishery was not actively prosecuted, although the returns show a slight increase of 1,570 cwt. This fishery, at one time a leading industry in this province, has of late years been almost completely abandoned. This is not caused by any scarcity of fish but to the fact that fishermen find more lucrative employment in the lobster and mackerel fisheries.

HAKE.

The catch of hake shows a falling off 15,502 cwt. There is a great abundance of hake during the summer months in the coastal waters of this island, but the fishery is not vigorously prosecuted and poor results are shown.

A scarcity of bait and stormy weather contributed their share in making the season's work a failure, as the fishery to be successful must be prosecuted partly at night and at a considerable distance from the shore.

SMELTS.

Fishing for smelts with bag-nets in the rivers of this province was very successful during the season, and the catch shows an increase of about 300,000 lbs. This is a new industry here, and, as it is carried on in the fall and winter months, gives employment to a large number of young men who otherwise would be compelled to seek work abroad. At the present time the fishery is being actively prosecuted at all points, and it is believed will show excellent results another season.

OYSTERS.

The oyster fishery has not proved successful in island waters this season, and the returns show a decrease of 3,310 barrels. The beds at Richmond Bay show signs of depletion, the whole shortage occurring at that place.

In the smaller bodies of water the beds appear to be in fair condition, but at Richmond Bay the yield is decreasing from year to year, although more men, boats and tongs are employed. The average size of the product is also becoming smaller, indicating that the beds are being overfished. This fishery is not in a satisfactory condition and requires intelligent attention to preserve it.

SALMON.

Fishing for salmon is not carried on in the rivers of this province, the quantity appearing in the returns being taken with gill-nets set in the estuaries and bays and along the coast. In the vicinity of St. Peter's Bay in King's County, a considerable fishery was carried on, several parties having provided nets and other outfit for that purpose. In view of the probable future development of this fishery I would beg to recommend that it be placed under license, thereby bringing it more directly under the control of the department. During the season some difficulty was experienced in settling disputes between parties with regard to the location of nets; the fishermen not recognizing the authority of the guardians when the fishery was not under license. The overseer and guardian at Dunk River in Prince County were much annoyed by poachers on that stream during the run of salmon. The poachers, tempted by the great abundance of salmon in the river, came in organized gangs

armed and otherwise fully prepared to resist the officers. On several occasions they set the guardians at defiance and although every effort was made by Overseer McBride and the men under him to protect the stream, it is feared that considerable fish were taken by the poachers.

TROUT.

In some of the streams trout were fairly plentiful, while in others a great scarcity was noticed. The returns show an increase in the catch of 1530 lbs. over last year. The estimate of the quantity taken is, however, only approximate as the catch is chiefly made by anglers from whom reliable returns cannot be obtained. The rivers generally are in poor condition, trout being scarce and small in most of the streams.

The minor fisheries such as haddock, halibut, eels, alewives, &c., show no great change from year to year.

Fishing for haddock and halibut is not prosecuted as a separate industry, the quantities appearing in the returns being taken in connection with the cod and hake fisheries.

Eels are plentiful in all the rivers, and are taken in large quantities and sent in a frozen state to the markets of the United States. Alewives do not frequent the streams now as in former years, the small quantity appearing in the returns (569 barrels) being the whole catch for the season.

Fish products, owing to the small catch of hake, shows a considerable falling off. Generally the season's operations cannot be considered satisfactory.

The large catch of herring has fairly well maintained the total value, but, as herring is chiefly used as bait, its great abundance has not been of much benefit commercially. The shortage in mackerel was keenly felt by fishermen and dealers especially as there was no increase in any of the other branches to compensate for it.

I have the honour to be, sir,
Your obedient servant,

A. LORD, *Agent*.

PRINCE EDWARD ISLAND.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, Quantity and Value of Fishing Materials, Kinds and Quantities of Fish, and the Total the Number of Men employed, &c., in the Province of Prince Edward Island, for the Year 1893.

FISHING VESSELS AND BOATS.				FISHING MATERIAL.				KINDS OF FISH.																			
DISTRICTS.																											
Vessels.				Boats.		Gill Nets.		Trap Nets.		Seines.		Salmon, fresh in ice, lbs.	Herrings, salted, brls.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Number.										
No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.							Fathoms.	Value.								
<i>Prince County.</i>																											
1	Nail Pond.....	11	513	10000	54	3490	320	5480	2890	2	1000	4	705	1200	5300	2126	200	5300	6000	1525	1						
2	Tignish.....	3	113	3500	31	440	156	3846	1220	2	1000	6	1010	1550	2900	357	200	2900	6000	2126	2						
3	Alberton.....	16	1233	43	1900	920	482	1900	920	3	355	3	355	580	2496	130	40	2496	6000	130	4						
4	Narrows.....	6	970	28	482	200	300	482	200	2	600	2	600	800	1000	50	50	1000	6000	50	5						
5	Grand River.....	2	60	2000	10	1200	48	800	300	2	600	2	600	800	1000	200	40	1000	6000	200	6						
6	Malpeque.....	2	90	2500	10	600	36	2000	350	2	1000	2	600	800	2000	4	7	2000	6000	4	7						
7	Tryon.....	2	90	2500	10	600	36	2000	350	2	1000	2	600	800	2000	4	7	2000	6000	4	8						
8	Summerside and Richmond Bay.....	10	60	2515	119	5376	2686	5376	2686	10	200	20	200	200	7159	9	9	7159	6000	1143	9						
9	Egmont Bay.....	130	3900	400	12	200	20	6500	1625	6	800	6	800	2000	1500	11	10	1500	6000	2500	10						
10	Minnegash.....	6	100	12	12	200	20	200	20	6	800	6	800	2000	1500	11	10	1500	6000	2500	10						
11	Bays and Rivers.....	18	776	18000	105	440	19248	28859	10931	2	1000	21	3470	6130	23880	5000	5000	23880	6000	8075	11						
Totals.....																		5000	5000	23880	6130	200	23880	5000	6000	8075	11

PRINCE EDWARD ISLAND — Continued.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Number.	DISTRICTS.	KINDS OF FISH.												FISH PRODUCTS.		TOTAL VALUE.	Number.					
		Mackerel, fresh or preserved, in cans, lbs.	LoBSTERS, preserved in cans, lbs.	Cod, dried, cwt.	Cod Tongues and Sounds, brls.	Hake, dried, cwt.	Hake Sounds, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alwives, brls.	Oysters, brls.	Clams, brls.	Beets, brls.			Tom-cod or Frost fish, lbs.	Fish Oils, galls.	Fish used as bait, brls.	Fish Guano, tons.	
1	Nail Pond.....	4000	222864	280	..	210	840	..	2000	..	500	2000	4000	35	45	..	450	1050	295	84,223	46	1
2	Tignish.....	..	252095	930	..	1000	2400	..	800	..	..	2000	4000	..	28	..	1435	3300	..	93,266	44	2
3	Alberton.....	..	99984	116	..	..	..	..	..	..	..	..	10000	..	..	..	100	1280	..	33,298	76	3
4	Narrows.....	..	68880	294	..	25	..	..	..	..	..	..	5000	..	2	..	151	79	..	25,323	60	4
5	Grand River.....	..	7056	150	..	..	..	..	..	..	..	..	47000	..	2	..	223	25	..	24,519	54	5
6	Malpeque.....	..	75888	1600	..	250	..	..	250	..	..	..	37000	..	40	..	5800	..	20	34,321	32	6
7	Tryon.....	..	215136	20	..	15	60	..	2000	..	..	..	18000	20	2	300	600	..	43,576	54	7	
8	Summerside and Richmond Bay.....	..	20640	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52,898	50	8	
9	Egmont Bay.....	..	323712	300	..	..	..	..	500	..	..	..	..	..	5	..	300	1500	..	93,537	18	9
10	Miminegash.....	..	223152	90	..	..	..	..	18400	..	..	..	190500	12	..	..	..	..	..	78,011	28	10
11	Bays and Rivers.....	..	..	..	..	..	..	..	..	..	..	..	..	..	427	..	..	..	..	17,894	00	11
	Totals.....	6500	1509408	3780	2	1650	3300	255	24200	2000	311500	67	27387	559	800	3259	7234	515	580,961	72		

PRINCE EDWARD ISLAND—Continued.

Return showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Number.	Districts.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.						KINDS OF FISH.								
		Vessels.			Boats.			Gill-Nets.			Trap-Nets.			Seine.			Salmon, fresh in ice, lbs.	Herring, salted, brls.	Herring, frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Number.
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Fathoms.	Value.	No.	Value.	No.	Fathoms.	Value.						
<i>King's County.</i>																						
1	St. Peter's.....					44	1500	114	5000	1500						1600	271				617	1
2	Dundas.....					150	3000	300	4500	1500							1750				600	2
3	Murray Harbour.....	8	267	8000	55	100	2000	225	5400	2100							480				25	3
4	Souris.....	1	11	200	4	125	3000	235	10000	3600		2					1733				454	4
5	North Lake.....					75	1500	182	3375	900		1					730				825	5
6	Naufrage.....					65	1610	195	14000	700							1500				700	6
7	Georgetown	8	236	5400	49	50	2000	100				1					5600	1000			600	7
Total		17	514	13600	108	609	14600	1371	29675	10360		4					12064	1000			3821	

PRINCE EDWARD ISLAND—Continued.

Return showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

Number.	DISTRICTS.	KINDS OF FISH.												FISH PRODUCTS.				TOTAL VALUE.	Number.		
		Mackerel, fresh or preserved, in cans, lbs.	LoBSTERS, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and Sounds, brls.	Hake, dried, cwt.	Hake Sounds, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alewives, brls.	Oysters, brls.	Clams, brls.	Eels, brls.	Tom-cod or Frost fish, lbs.	Fish Oils, galls.			Fish used as bait, brls.	Fish Guano, tons.
<i>King's County.</i>																					
1	St. Peter's		88368	1000		30	40		400	9800	315						512	271		29,832 82	1
2	Dundas,		172370	150		175														41,606 80	2
3	Murray Harbour		227136	10600		4020	500			5000				25			2700	3000		101,899 04	3
4	Souris		302340	2477		1957	3598							275			1450	1700		50,384 60	4
5	North Lake		89712	1125					6500	3000	112			10			750	500		35,151 18	5
6	Naufrage		50400	60			50		70	2000								60	1200	26,026 00	6
7	Georgetown		80640	50		150				3000				20	20			200	2000	49,134 60	7
	Total		798866	15462		6332	3598	590	6570	3400	19800	427	295	55			5672	8731		331,035 04	

PRINCE EDWARD ISLAND—Continued.

RETURN showing the Number Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Continued.

DISTRICTS.	FISHING VESSELS AND BOATS.					FISHING MATERIALS.					KINDS OF FISH.							
	Vessels.			Boats.		Gill Nets.		Trap Nets.		Seines.			Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved, in cans, lbs.	Number.	
	No.	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.	Fathoms.	Value.						
Queen's County.																		
1 Tracadie.....					50	2500	120	5900	1475		4	600	1200	950	1365	490	1	
2 Charlottetown and Lot 48.....					4	50	4										2	
3 Crapaud.....					9	310	18	740	200						258	16	3	
4 Point Prim.....					90	1900	125	1100	500		1	225	90	20	2000	6	4	
5 New London.....					39	1600	117	4560	1596		3	480	300		1000	800	5	
6 West River and Lot 65.....	1	17	450	5	35	1130	60	212	90						122		6	
7 Rustico.....					51	5120	250	3000	1850		9	1500	3000		2240	1072	7	
8 Bays and rivers.....	3	50	1300	17													8	
	4	67	1750	22	278	12610	694	15512	5711		17	2805	4590	950	5005	2384	9	
RECAPITULATION.																		
1 Prince County.....	18	776	18000	105	440	19248	1222	28859	10931	2	1000	21	3470	6130	200	23880	5000	6500
2 King's do.....	17	514	13600	108	609	14600	1371	29675	10360			4	615	1050	1820	12064	1000	8075
3 Queen's do.....	4	67	1750	22	278	12610	694	15512	5711			17	2805	4590	950	5005	6500	3821
																		2384
Grand Total.....	39	1357	33350	235	1327	46458	3287	74046	27002	2	1000	42	6890	11770	2970	40949	12500	38100

PRINCE EDWARD ISLAND—Concluded.

RETURN showing the Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries, &c.—Concluded.

Number.	Districts.	KINDS OF FISH.													FISH PRODUCTS.					TOTAL VALUE.	Number.				
		Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod Tongues and Scales, dried, cwt.	Hake, dried, cwt.	Hake Scales, lbs.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Alewives, brls.	Oysters, brls.	Clams, brls.	Reels, brls.	Flounders, lbs.	Tom-cod or Frost Fish, lbs.	Coarse and Mixed Fish, brls.	Fish Oils, galls.	Seal Skins, No.			Fish used as bait, brls.	Fish used as manure, brls.	Fish Guano, tons.	
Queen's County.																									
1	Tracadie	119136	805					500		65000	75	40							440	1200				39,227 54	1
2	Charlottetown and Lot 48	51840								13000		1125												10,632 60	2
3	Crapaud	91776								300											740	115		16,666 64	3
4	Point Prim	172416	10			12	3	600		500		40	10	4	100	120	88		25	10	30	10	200	26,955 74	4
5	New London	74400	825			50	20			80750		150		20					200		800			32,221 00	5
6	West River and Lot 65	260976								2940		325											90	42,998 14	6
7	Rustico	89856	180					4100		2900		560			20				500		1700			47,114 84	7
8	Bays and rivers														42									2,655 00	8
		860400	1820		62	17	23	5200		165090	75	2240	130	86	100	870	938		1165	10	4470	125	290	218,471 50	

RECAPITULATION.

1	Prince County	1509408	3780	2	1650	3300	255	24200	2000	311500	67	27387			559		800		3259		7234		515	580,861 72	1
2	King's do	798806	15462		6332	3598	590	6570	3400	19800	427		295	55					5672		8731			334,035 04	2
3	Queen's do	800400	1820		62	17	23	5200		165090	75	2240	130	86	100	870	938		1165	10	4470	125	290	218,471 50	3
	Grand Total.	3168674	21062	2	8044	6915	868	35970	5400	496390	569	29627	425	700	100	1670	938		10096	10	20435	125	805	1,133,368 26	

RECAPITULATION.

SHOWING Yield and Value of the different Fisheries in the Province of Prince Edward Island, during the year 1893.

Kinds of Fish.	Quantity.	Price.		Value.		Total Value.
		\$	cts.	\$	cts.	
Salmon, fresh.....	Lbs. 2,970	0	20	594	00	
Herring, salted.....	Brls. 40,949	4	50	184,270	50	
do fresh.....	Lbs. 12,500	0	01	125	00	
do smoked.....	" 6,000	0	02	120	00	
Mackerel, salted.....	Brls. 14,280	14	00	199,920	00	
do canned.....	Lbs. 38,100	0	12	4,572	00	
Lobsters, canned.....	" 3,168,674	0	14	443,614	36	
Cod, dried.....	Cwt. 21,062	4	50	94,779	00	
Tongues and sounds.....	Brls. 2	10	00	20	00	
Hake, dried.....	Cwt. 8,044	3	00	24,132	00	
do sounds.....	Lbs. 6,915	0	50	3,457	50	
Haddock.....	Cwt. 868	3	50	3,038	00	
Trout.....	Lbs. 35,970	0	10	3,597	00	
Halibut.....	" 5,400	0	10	540	00	
Smelts.....	" 496,390	0	05	24,819	50	
Alewives.....	Brls. 569	4	50	2,560	50	
Oysters.....	" 29,627	3	00	88,881	00	
Clams.....	" 425	6	00	2,550	00	
Eels.....	" 700	10	00	7,000	00	
Flounders.....	Lbs. 100	0	05	5	00	
Tom-cods.....	" 1,670	0	05	83	50	
Mixed and coarse fish.....	Brls. 938	2	00	1,876	00	
Fish oil.....	Galls. 10,096	0	40	4,038	40	
Seal-skins.....	10	1	00	10	00	
Fish used as bait.....	Brls. 20,435	1	50	30,652	50	
Fish used as manure.....	" 125	0	50	62	50	
Fish Guano.....	Tons. 805	10	00	8,050	00	
Total value, 1893.....						1,133,368 29
Decrease, 1893.....						46,488 42

RECAPITULATION.

SHOWING the Number and Value of Vessels, Boats, Nets, Lobster Canneries, Traps &c., engaged in the Fisheries of the Province of Prince Edward Island for 1893.

Number.	Article.	Value.	Total Value.
		£	£
39	Vessels, 1357 tons.....	33,350	
1,337	Boats.....	46,458	
74,046	Fathoms, gill-nets.....	27,002	
2	Traps.....	1,000	
42	Seines, 6890 fathoms.....	11,770	
56	Smelt nets.....	1,781	
225	Trawls.....	2,607	
			123,968
215,000	Lobster traps.....	129,000	
217	do canneries.....	296,150	
1,600,000	Fathoms, rope.....	65,000	
			490,150
4	Ice-houses.....	650	
135	Fish houses.....	22,500	
10	Piers.....	4,250	
1	Steamer.....	3,000	30,400
	Total.....		644,518

APPENDIX No. 8.

QUEBEC.

REPORT OF THE GULF OF ST. LAWRENCE FISHERIES FOR THE
YEAR 1893, BY COMMANDER WM. WAKEHAM, INCLUDING SYNOPSIS
OF ALL THE OVERSEERS' REPORTS.

GASPÉ, 3rd December, 1893.

Sir CHARLES HIBBERT TUPPER, &c., &c., &c.,
Minister of Marine and Fisheries.
Ottawa.

SIR,—I have the honour to submit the report on the condition of the fisheries of the Gulf division of the province of Quebec, for the season just closed. Attached will be found synopsis of the reports of the local officers, and detailed statistics of the reports of the local officers, and detailed statistics showing the quantity and value of the catch in each of the subdivisions.

The fishery has been a good one, and the close of the season finds the fishing population, both on the south and north shores, comfortably off and well provided for the winter. The fishing season opened early, and when I passed along the coast, on my return to Gaspé last week, I found boats still fishing for herring and cod. There is no doubt that if the facilities existed for shipping fresh fish to market after the close of navigation, the fishing along many parts of the coast of Gaspé and Bonaventure could be extended for a month—this at a time when herring and cod are more than usually abundant, and more inshore than at any other season.

In 1892, which was also a good year, the fishery was estimated to have yielded a value of \$1,915,954.36. For this present year, the accompanying returns give us a total of \$1,942,755.71, or an increase of \$26,801.35. I would here point out that these returns do not by any means give us the full value of the fish taken out of even the strictly inshore waters of this division, as at the Magdalen Islands we have in the spring a large quantity of herring taken with the drag-seine, in Pleasant Bay, by vessels from the United States and Nova Scotia, while during the summer large quantities of mackerel are also taken close inshore about these islands with the gill-net, and hook, by fishermen from the same places. Again, on the Labrador, it is safe to say that this season there was taken by vessels from Nova Scotia and Newfoundland, many of which used trap-nets which are fished from the shore, while others, using the hook and line, in every case fished within a mile of it, at least 120,000 quintals. of codfish. Now, all this fish is actually taken close inshore by vessels which carry on the fishing from within our harbours, and we might very fairly include the product of this fishery in our returns, which would certainly swell them by at least half a million dollars. The fish for which we give you quantities and values in the accompanying returns, is, however, only that which is actually landed and cured on shore in the division.

SALMON.

Salmon net-fishing began about the 20th May, and the catch shows an increase both in Gaspé and Bonaventure, while in the county of Saguenay the yield is about the same as in 1892, which was a good year; the coast nets in the sub-divisions of Godbout and Moisie again made wonderful fishing.

The fly-fishing was not up to the average, though in the latter part of the season many sportsmen did well. Owing to the small snowfall of last winter, the spring freshets did not amount to anything, consequently the fish did not take to the rivers until the month of July, when after several heavy rains, the waters rose and became less clear, those who chanced to be on the rivers at the right times to get the benefit of these small floods had good sport.

I believe that, as far as the counties of Gaspé and Bonaventure are concerned, with the present number of nets, fished strictly up to the regulations, and a fair annual distribution of fry to the rivers, there should be no further decrease of the salmon. In that part of the county of Saguenay within the limits of the Gulf division, there has certainly been no perceptible decrease in my time. I would not advise for Gaspé and Bonaventure any increase over the number of nets now fished, nor would I advise the issuing of any new licenses in that part of Saguenay County, west of Natashquan.

HERRING.

The catch of herring has again been small, though these fish were more than usually constant for bait purposes, all through the season on the south coast, yet the spring catch at the Magdalen Islands was below the average, and the fall fishing on the Labrador was a complete failure. Small fat herring were very abundant along the coast of Gaspé in December, they were only taken for local use. These small fat fish are not found at any other season, save when the ice is making along shore in the months of November and December, they are undoubtedly as far as quality and flavour is concerned, far and away ahead of any other run of herring, but they never reach the market.

COD.

Cod-fishing began early in May, continued good all through the season, and where the fishermen were hardy and enterprising enough to go out after them, were abundant close inshore until Christmas; since this date I have not heard of any having been taken, but there can be no doubt that they are still along the shore. On many parts of the north coast during the month of July, the quantity of cod on the inner banks, or schooling at the surface inshore was something phenomenal; fishing in many places had to be stopped because the shore crews were not able to split, and salt the fish as rapidly as it was being caught and brought in.

The fishing was good even on the north shore until late in the fall, but the great spurt was in July, when the fish were schooling inshore after the capelin. Overseer Gaudin in his report for the Natashquan subdivision, mentions the case of one boat (two men), which took 450 quintals of cod in 24 days. This season has been a good one for the fishermen, the price of fish was fair, and flour never was cheaper; a barrel of good flour could be had for a quintal of fish.

Owing to the continued trouble in Brazil, the season has been a poor one for the fish exporters. The latest reports are that some of the vessels which have arrived at Rio Janeiro with this season's fish, have not been allowed to land their cargoes, as the Brazilian market has always been the one to which the best of that which is known as "Gaspé shore fish" has been sent; this means a serious inconvenience to shippers.

As our fish has gradually been driven out of the European markets by the French fish, owing to the enormous bounty paid by the French Government, an increasing amount of it has been sent to the West Indies and South America, these latter markets are always more or less uncertain, as these southern countries are in an almost chronic state of revolution. It therefore seems high time that our fishermen turned their attention more to the market which exists at their very doors, with the railway facilities which we either now have, or which we should have, a much larger trade should be developed with the interior of our own continent, and the methods of

curing fish at present in vogue, which have existed from old time, which are old fashioned and costly, and which will not suit the North American market, should be so reformed and changed as to meet the requirements of the nearer people.

LOBSTERS.

The output of the lobster canneries shows an increase of 69,200 pounds over the pack of 1892, this is rather due to the increased number of traps fished than to any other cause; at some points the run of lobsters is keeping up, that is the average size of the lobster is not decreasing, and this of course is always the best proof that the fishery is not being overdone, but unfortunately at other localities, as in the upper part of the Baie Chaleurs, and at the Magdalen Islands, there is a manifest increase in the number of lobsters required to fill a pound can. The fact is that there really must be some limit put to the number of traps fished over a given area. I would again point to the fact, that the only lobster fishing done out of season in the Gulf division is in the lagoons, at the Magdalen Islands, where the boats of "La Canadienne" found and destroyed a number of traps, which were being fished after the close of the season, as these lagoons are undoubtedly frequented by the lobsters for trading purposes, I would strongly urge that they be closed, and that no one be allowed to fish for lobsters in these lagoons at any time.

MACKEREL.

The mackerel fishing shows a decided improvement, the take being 8,215 barrels as against 4,817 barrels in 1892. There is no doubt that these fish are becoming more abundant in the gulf, it is too soon to attribute this increase entirely to the regulation prohibiting the use of the purse seine in the bay, and inshore waters, though there is no doubt that by this prohibition of purse-seining, these inner waters where the boats fish have been less disturbed, and the fish that enter them have not been harrassed and driven off. An immense body of mackerel was known to have entered the Gulf in May and June, many of these fish remained about the Magdalen Islands all season, and the shore hand and line boats did well, averaging about 40 barrels. The boats fishing for cod on the banks off Cape Gaspé report having seen large schools passing north and west, some of these schools were seen as far up the river St. Lawrence as Cape Chatte.

Except at the Magdalen Islands no regular mackerel fishing carried on. I am inclined to believe that if the mackerel had been well baited, a considerable fishery might have been made in the Bay Chaleurs and in Gaspé Bay.

SEALS.

The seal fishery shows a slight improvement, the yield being 21,038 skins, as against 18,971 in 1892. There are not now as many vessels carrying on this fishery as we formerly had. Owing to the decrease in the value of the oil, it does not pay to renew the vessels, and as these become worn out or lost their places are not taken by others.

I see that it is again proposed to fit out the steamer "Newfoundland" at Halifax, for the seal fishery in the gulf. There is no doubt that immense numbers of young seals are pupped on the ice between the east point of Anticosti and Rich Point in Newfoundland, and such of the Newfoundland steam sealers as come into the gulf usually make fair voyages. There is less risk of entirely missing the seals than there is on the outer coast of Newfoundland.

BAIT.

Herring were more than usually constant for bait purposes on the south coast throughout the season, while capelin were as abundant as ever on the north shore. A large quantity of frozen spring herring was put up at some of the fishing stations, though owing to the fairly regular supply of fresh bait, it was not in such demand as it is sure to be when fresh bait is scarce, yet it was used to some extent, and the prejudice against its use at first shown by the boat fishermen is disappearing.

SYNOPSIS OF OVERSEERS' REPORTS.

BONAVENTURE COUNTY—RESTIGOUCHE SUBDIVISION.

Overseer Verge reports the salmon fishery as holding its own, with a slight increase. The weather during the month of June being extremely dry and warm, the salmon kept out in deep-water, and only reached the fluvial waters of the upper Restigouche and branches late in the season; fish were reported in the Upsaltquick and Tom Kedgwick late last fall in much greater numbers than usual. Owing to the dry, warm weather, the estuary nets had to be taken up early, as it was impossible to keep them clean, the nets near tide head where the water was cooler, and there was more current, so that they did not foul; did well in July.

The smelt fishery with bag-nets under the ice is rapidly developing in the Restigouche, and is likely to become as extensive an industry as it is on the Miramichi. Fifty licenses were issued last season for the coming winter. Mr. Verge has already sent in over 200 applications.

Mr. Verge knows of no abuse or violation of the fishery regulations in his subdivision.

CARLETON SUBDIVISION.

Overseer Cyr reports an improvement in the salmon fishery of 25,000 pounds over last year. This was due to the fine weather, and the fact that the fish remained in the salt water instead of going directly up the rivers.

The cod-fishery was about the same as usual, only one lobster cannery was opened in this subdivision; lobsters were scarce. Spring herring were abundant, and the fishermen took all they wanted; a considerable quantity were salted for market. Fall herring and mackerel were scarce.

BONAVENTURE SUBDIVISION.

Overseer Smith reports a slight improvement in the salmon fishery, though it was not up to an average. Lobster fishing began about the 1st of May; four canneries were opened; they had to close down early owing to the scarcity of lobsters. Spring herring was an average catch. Cod fishing was fair in summer, though bait was scarce, and fishermen had to use clams. The fall catch of cod was good, being better than it has been for years, owing largely to the abundance of small herring which struck in September and remained on the coast till the end of November, giving the fishermen plenty of bait. Some boats at Paspebiac landed as much as thirty drafts a week. There was no abuse of the regulations in this subdivision. Mr. Smith says breakwaters for the protection of fishing boats are badly needed at Capelin and Bonaventure East. There is no chance for fishermen to save large boats at either of these places. During a breeze of wind in August all the boats moored out between Bonaventure and New Carlisle were carried away and lost; this would not have happened had there been any place to shelter them.

PORT DANIEL SUBDIVISION.

Overseer Ross reports cod fishing began earlier than usual, but fish were not plenty in May and June. July and August gave about an average catch, but in September, October, November and up to the 23rd of December the fishing was exceptionally good, and although the weather was rough the boats did well.

Lobster fishing averaged about the same as last year, though gales of wind during the best of the fishing in May caused serious loss of traps and greatly handicapped the fishermen. Summer herring was as usual a total failure. Mr. Ross can see no particular cause for this as spring and fall herring do not appear to be any getting scarcer. Breakwaters for the protection of fishing boats are much wanted at such places as Nouvelle, Shigawake and D'Anse au Gascon. They could be built at a very moderate cost, and would be the means of almost doubling the fishery at these stations, as the boats would not have to be beached.

COUNTY OF GASPÉ.

GRAND RIVER SUBDIVISION.

Overseer Jones reports all kinds of fishing began early, though fewer nets were fished for salmon, yet the returns show nearly double the quantity caught in 1892. The quantity of lobsters canned is about the same as for the past year, there being a decrease of only about 3,000 pounds. Rough weather in May caused some loss of gear, which would much more than account for this decrease. The cod fishing was fairly good, it began early and continued until Christmas. Fall herring were abundant, though they were only taken to supply the local demand. This herring furnishes the principal winter food of the fishermen.

GASPÉ SUBDIVISION.

Overseer Annett reports the statistics show a decrease in the salmon catch but this is owing to a change in the limits, otherwise an increase of about 7,000 pounds would be shown. The herring fishery shows an increase of 679 barrels, and when the returns were being taken, herring were still being caught all along the coast. Lobsters show an increase of 13,988 pounds which is partly due to the opening of another cannery in Douglstown. The fishery was much impeded by a heavy storm which destroyed a great number of traps during the height of the fishing. In connection with this fishery quite a number of fishermen suggest that trawling for lobsters should be discontinued they contend that as the fish are caught in the night, it is not possible to sort out the small and berried lobsters till the morning, by which time a large number are injured before they can be sorted and liberated. There is an increase of 4,147 quintals in the cod-fishery. Fishing began on the 17th May and was good up to the close of the summer fishing on the 15th August; after this the weather was rough and the fall fishing was not up to the average, in spite of the fact that fish were abundant up to the end of the year. The smelt fishing shows a falling off of 808 pounds, this is due altogether to the failure of the fishing at Mal Bay where the smelt did not strike as usual.

Special guardians were put on to enforce the close season for salmon and trout at Peninsula, York River, Sandy Beach and St. John's River. The lobster canneries were all regularly visited, the fishery regulations were strictly observed. Mr. Annett is of opinion, and this is the opinion of fishermen generally, that some other means should be taken to collect parent salmon for the hatchery. Fishermen complain that all the fry put into other rivers are being taken from the Dartmouth, which is the smallest of the rivers emptying into Gaspé Bay, that this is unfair to the Dartmouth river, the fry taken from the Dartmouth fish should all go to the same river. Both fishermen and sportsmen are strongly of the opinion, that if at all possible, the parent fish should be had from the net fishermen, and that they should be taken fairly from among fish bound to all the rivers, and not from the Dartmouth river alone, as is now the practice.

FOX RIVER SUBDIVISION.

Overseer Thériault reports the cod and herring fishing in his subdivision as being fairly good. The season opened early and continued as long as it was possible to fish. There is only one salmon net fished in this subdivision, and there are no lobster canneries, the water deepens too rapidly to fish lobster traps.

MAGDALEN RIVER SUBDIVISION.

Overseer Lemieux reports that the cod fishing opened late in his subdivision, in fact only in July, but that in spite of this there is an increase of 1,480 quintals in the catch, bait was fairly abundant, and once the fishing did begin, the weather was fine which gave the fishermen a good chance. These white porpoises came down in June and no doubt drove the cod off. The porpoises were more abundant and came further down

the coast than usual. They left in the beginning of July and never came back again. Salmon fishing was poor. This is the third bad year in succession. There are but few nets in this division, and these are fished carefully, according to law, it is therefore difficult to account for the decrease in the salmon. It is to be remarked that the capelin have entirely left this coast; it may be that this has something to do with the disappearance of salmon.

MAGDALEN ISLAND SUBDIVISION.

Overseer Chevrier reports that the spring herring fishery in Pleasant Bay was good; this was largely due to the fine weather in May. The spring mackerel fishery with nets was also good. Fishermen complain that owing to the distance offshore at which they have to set their nets, the regulation concerning the taking up of the mackerel nets each morning bears hardly on them, they are of the opinion that the present regulations should be so amended as to come in force only on the 15th July. The summer and autumn fishing for mackerel was good, but the price of the fish fell. The cod-fishing was poor, several of the local fishing vessels went to Labrador, where they did well. The lobster fishing was about the same as usual, a number of lobster traps were seized and destroyed for being found in the water after the close of the season. This illegal fishing is done altogether in the eastern part of the division, about Grosse Isle. The only way to put a stop to it is for "La Canadienne" to make frequent visits in August and September.

COUNTY OF SAGUENAY—GODBOUT SUBDIVISION.

Overseer Comeau reports that owing no doubt to the very early and open spring, salmon made their appearance very early, and most of the fishermen being unprepared lost fully one-third of the best of the netting. One of the earliest nets put out, 29th May, caught on the first day fifty salmon. Most nets were put out only about the 7th June, and by the 20th June the best run of fish was over. A remarkable feature was the irregular manner in which the fish struck the shore, some stands getting forty or fifty fish a day, while neighbouring stands on either side would only be getting a few fish. This continued all through the season. The fish were a little larger than the average. The angling was fair in Godbout and Trinity rivers, considering the low state of the water in June and July. Cod were unusually abundant all over the division, they struck in earlier than usual, bait scarce in August and September. September and October were also stormy months, the scarcity of bait and the rough weather spoiled the fishing, but when the boats did get out, fish was always plenty.

Herring were abundant, but only a few fishermen regularly fit out with nets for this fishery. The same may be said of the halibut fishery—all of this fish that is taken is caught on the ordinary handlines while fishing for cod, and no distinct halibut fishery is carried on. Since the United States halibut fishermen have been prevented from fishing inshore, there has been a marked increase in the number and size of the halibut caught. Mackerel, for some years back, Godbout Bay seems to be the only place in this subdivision where mackerel are caught or appear. This year several very large schools were seen, but they did not come sufficiently inshore to permit of their being taken with the ordinary drag-seine. A couple of hauls were made, and one small school of nine barrels taken. At Pointe des Monts and Caribou Islets a few were taken in the herring-nets. Seal hunting was about the usual average. Since the Manicouagan Fish, Oil and Guano Company have abandoned their establishment at Manicouagan, seals have returned there as formerly. Mr. Comeau says the fishery regulations were well observed. Certain persons started a report that the Sunday close season for salmon was not observed, and he consequently made a careful inquiry and found that these reports were only founded on suspicion; with a view to be positive on this head he would like, next season, to be allowed to appoint a couple of guardians to watch certain nets, as his own movements are reported regularly along shore from post to post by the telegraph

operators. Mr. Comeau advises that a larger mesh should be used for salmon-nets, and that trout-nets should not be used after the 15th of July, as at or after this date grilse are apt to be taken in the trout-nets. He would prefer to have the trout, after the date mentioned, taken with the seine.

MOISIE SUBDIVISION.

Overseer Migneault reports that the salmon fishing began on the 22nd of May, and though there was a smaller catch than last year, yet the fishing was above the average. The fly fishermen were on the river two weeks too late yet the six rods took 153 salmon. The cod fishing was excellent. The catch of halibut, made altogether by the cod fishermen was good. For some years back no halibut trawlers have visited this part of the coast, so that the halibut are steadily increasing. The herring fishing was not as good as usual. No mackerel were seen about Seven Islands Bay nor any where else in this division. Herring bait missed between the 15th August and the 15th September, but the cod fishing was not seriously interrupted, as clams are found abundantly at Moisie and Seven Islands. The only strange fishing vessels which visited this division during the season were two schooners from Halifax which carried on the cod fishing from Moisie during June and July.

MINGAN SUBDIVISION.

Overseer DuBerger reports the cod fishing in some localities of this division as being extra good, in some places the outfitters had to stop the supply of bait to fishermen as they could not cure the fish brought in, this to the loss of the fishermen. The herring fishing at Labrador made by vessels from Esquimaux Point was a complete failure. Mr. DuBerger advises that no more trap-net licenses be issued for his division, as he claims that before trap-nets were fished the fishermen used to be able to fish close inshore, while now they are obliged to go far out to the banks after fish. He favours the increase of the fishing bounty to fishermen; would advise an increased bounty to Indians, and the supplying of fishing outfits to the Mingan Indians, so that they could be trained to fishing, and give up hunting, as the fur in the interior is getting scarce; he would also grant tidal salmon-nets wherever applied for. The salmon catch in the Mingan division was double that made in 1892. A severe gale occurred on the 29th and 30th of August, which caused a great loss of fishing boats between Thunder River and Mingan.

NATASHQUAN SUBDIVISION.

Overseer Gaudin reports that the spring seal fishery though not as good as some years, was yet much better than last year. The salmon fishery has been the best for the last six years. Angling on the Natashquan was good, one rod having taken twenty-two fish in one day. The spring school of cod was again very large, and remained in shore until the 20th July; the weather was fine throughout, so that no time was lost to the fishermen. One boat's crew at Natashquan harbour took 450 quintals (green) in twenty-four days. The boats that fished on the banks during the remainder of the season also caught more fish than during other years. Capelin were plentiful during the spring fishery, afterwards clams and lance were used for bait. About 300 barrels of herring were taken at Natashquan during the middle of September; this reminded the fishermen of old times, as it is some years since any herring were taken at Natashquan.

The packers of lobsters at Watasheeshoo found plenty of lobsters to occupy them during the short time they could fish. These people complain of the shortness of the season, and Mr. Gaudin thinks with reason. They only get their traps out a month later than fishermen on the south shore, and yet they have to close down at the same date. All the cod caught in this subdivision is bought in by the firm of Robin, Collas & Co., and is destined for foreign markets; the salmon, herring and lobsters were all shipped to Quebec.

ST. AUGUSTIN SUBDIVISION.

Overseer LeGouvé reports the salmon fishing as being better than in 1892, the returns giving 100 barrels for that year, whereas this year 148 barrels have been taken. The cod fishery was again an abundant one 10,476 cwt. having been taken by the shore boats in the division. This part of the coast was visited by a large number of fishing vessels from Nova Scotia and Newfoundland, as most of these vessels are now fishing trap-nets. *Overseer LeGouvé* is afraid that the number of these nets is being overdone, and the salmon-net fishing stations of the resident inhabitants are being crowded by the trap-nets of these strangers. He thinks it will be well to have "La Canadienne" down much earlier on the coast than she was last season, to look after the fishing done by these vessels, as it is quite impossible for one local overseer to patrol the coast from Coacoachoo to Chicatica. Herring missed altogether. Capelin was abundant during the time of the summer cod fishing, at other times clams and lance were used for bait. The sedentary seal fishery was not up to the average.

BONNE ESPÉRANCE SUBDIVISION.

Overseer Whitely reports the salmon fishery as being below the average. This was due to the backing up of the drift ice, which compelled many of those who fished exposed stations to take out their nets while the salmon were running. The cod fishery was again a most abundant one, the catch being 28,150 quintals as compared with 24,320 quintals in 1892, which was also an exceptionally good year.

Herring missed entirely over all this part of the north coast. A larger number of vessels than usual came up along this shore to meet the cod before going down on the Labrador; they nearly all did well. All the codfish taken in this subdivision is shipped either to Halifax or St. John's, Newfoundland or directly to market in England or the Mediterranean. Salmon, seal-skins and seal oil either go to Halifax or Quebec.

I have the honour to be, sir,
Your obedient servant,

WM. WAKEHAM.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS IN THE PROVINCE
OF QUEBEC (EXCLUSIVE OF THE GULF DIVISION) FOR THE
YEAR 1893.

SOUTH SHORE RIVER ST. LAWRENCE, FROM CAPE CHATTE TO POINT LEVIS.

Overseer Johnny Joncas reports a considerable increase in the general yield of the fisheries under his charge. While salmon net-fishing was the best enjoyed there for years, angling was not proportionately improved, although salmon seemed plentiful, they did not take the fly, owing perhaps, to the water being low and very clear. Herring and cod fishing were good, especially in the lower part of this district, where large captures of the latter were made even after the 10th November. The outlay of bringing this fish to market (over 60 miles by wagons) reduces the profits to a minimum. With the exception of a case of saw-dust violation, where the party was prosecuted and fined \$20 and costs for allowing rubbish to escape from his mill into River Blanche, no other contravention came to the notice of this officer. The Matane mill was closely watched by day and night, and no poaching was carried on there this season.

The total value of these fisheries are given at \$23,500, an increase of \$5,500 over last year's product.

Overseer L. E. Grondin reports an increase in the yield of salmon and sardines, but a considerable shortage in herring. The latter he attributes to the prevalence of porpoise around the coast at that time. The total yield is valued at \$15,000, being a difference of \$9,000 less than the season of 1892.

Mr. Grondin also collected the statistics of fisheries for the neighbouring division in the vicinity of Rimouski. There also, all kinds of fish make a favourable showing with the exception of herring, which entirely failed. The total yield of ex-overseer Martin's division is valued at about \$7,000.

Overseer Napoléon Levesque reports a great diminution in the yield of the fisheries of the district as compared with the season of 1892. This is especially noticeable in herring and coarse fish. In fact, the total value only amounts to \$8,400, a decrease of over 80 per cent.

Overseer Xavier Pelletier also returns a large decrease in the yield of the fisheries of his division. Where he reported nearly 500 barrels of herrings in 1892, this year he only returns 11 barrels. The shad fishery was also a failure; but a fair catch of salmon was effected at St. Denis, 96 white whales (*marsouins*) were captured at River Ouelle. The whole catch of fish is completed at a value of \$12,000.

NORTH SHORE, RIVER ST. LAWRENCE, FROM QUEBEC TO BERSIMIS.

Overseer L. P. Huot reports the past fishing season as generally satisfactory. The slight decrease noticed in salmon, shad and whitefish is ascribed to the smaller number of men engaged in those fisheries. Eels, the staple fish of this division, were plentiful, their yield exceeding 200,000 pounds, a surplus of 63,000 pounds over the catch of the previous year. Pickerel also shows a large increase. The fishery laws were well observed. The total yield of the fisheries of this district valued at \$18,000, (an increase of 50 per cent over that of last season) is all disposed of on the local markets of Quebec City and vicinity.

Overseer Ulysse Bhéreur reports the salmon fishery of his district as steadily declining, in fact only 500 pounds were taken this season. The yield of the herring and sardine fisheries was the smallest on record in this district. No sufficient reasons are given for this discrepancy. The fishermen who have done extensive repairs to their porpoise fishery were greatly disappointed in capturing but a single white-whale (*Marsouin*). Eels seem the only kind of fish which give satisfactory results. Capelin fishing was a total failure. The total value of the fisheries of this division only amounts to \$5,570, a decrease of 33 per cent as compared with last year's produce, which was then considered a very poor one.

Overseer L. N. Catellier reports a noticeable improvement in almost every kind of fish in his district. The salmon net fishermen are specially satisfied with their season's operations, being over 40 per cent over that of 1892. The rivers are reported well stocked with parent fish, one guardian states that in a single section of the Ste. Marguerite River, he counted over 300 salmon. Two patrolmen were constantly employed between Baie des Rochers and Bersimis during four months, with beneficial results. Illegal trout fishing was detected and the parties fined. The total value of the Saguenay district fisheries is given at \$22,700, being an excess of nearly \$5,000 over the product of the previous year.

QUEBEC TO UPPER OTTAWA.

SHERBROOKE AND MEGANTIC DIVISIONS.

(Total value of fisheries given at \$12,434.)

Overseer P. W. Nagle reports fish as plentiful as ever in the waters of Sherbrooke and Stanstead, about 30,000 pounds being taken this season, half of which were trout. This officer states he used his best endeavours to prevent poaching during the close seasons without detecting any irregularities, and he is aware of no existing abuses in the district under his charge.

Overseers Joel Shurtleff and *A. L. Darche* both return a slightly increased catch of fish in their respective divisions, consisting chiefly of pike, pickerel, maskinongé, bass and trout.

Overseer Allan McLeod states that no net fishing is allowed in Lake Megantic, and that most of the fish is caught there by sportsmen with hook and line and trawl. A mill-dam on the Chaudière River, only a couple of miles from its outlet into the lake is still unprovided with a fish pass, but the owners have promised to place one in next spring. This officer seized during the close season twenty gill-nets and bag-nets, besides several night-lines.

MAGOG AND BROME DIVISIONS.

Overseer N. A. Beach returns about an average catch of fish, but makes no report.

Overseer Horace Greene states that fishing for bass and lake trout was satisfactory. The latter fish are found on their breeding grounds as early as the 1st October, and by the 15th November are done spawning and have returned to deep water. This officer claims to have been out on Memphremagog Lake twenty-one nights during close season, and at times found the water so shallow that he could see large numbers of lunge, which would have fallen an easy prey to poachers, had not the guardians been vigilant. He is of opinion that the close season was fairly well observed. Formerly it was not uncommon to see lunge being peddled in the villages during close seasons, but for the past two years no such occurrence was noticed. The yield of the fisheries of this large lake is valued at \$7,765.

MISSISQUOI BAY DIVISION.

Overseer P. E. Luke reports that the spring fishing season was short, but while it lasted fishermen did well. Doré came into the bay early, and good catches were effected. Shad fishing was almost a failure, only three seines fishing for them. The close seasons are reported as well observed, and no abuses came to his knowledge. The dam owned by the Eastern Township Bank was carried away by the ice last spring and will not be rebuilt, thus leaving a free passage for the ascent of fish. Mr. Luke visited the other mill owners on July last and served them with the necessary notices to construct efficient passes in their dams, but so far none have complied, although they all expressed willingness to do so at the time. The total value of these fisheries does not reach \$3,000.

RICHELIEU RIVER.

Overseer James Finley, who has charge of the above named river from Lake Champlain to St. John's, reports that fish are gradually becoming scarcer. However, the eel fisheries which in 1892 only yielded 6,200 pounds, this year show 36,000 pounds, and Mr. Finlay is of opinion that even this is underrated, as the principal parties refused to give him the required information, which he had to seek at the ex-

press office. During his inspection trips Mr. Finlay did not notice saw-dust in sufficient quantity to injure fish, and he thinks that the fishery laws were generally adhered to.

Overseer J. O. Dion says that in the lower part of the Richelieu River, the fishing season was very short owing to ice, and the water became so low that even as early as the middle of May, seines could hardly be used. The fish pass in St. Ours dam is not yet in proper order to allow the ascent of fish. The restriction of past years have had the good effect of allowing the fish to thrive, for they are certainly not decreasing. Quite a few bass and pickerel were captured with hook and line. The total yield of Richelieu River is computed at \$8,200, an increase of nearly 40 per cent over 1892.

CHATEAUGUAY DIVISION.

Overseer Joachim Laberge reports the quantity of fish taken in his division to be equal to that of last year, with the exception of sturgeon, which show a considerable decline. Several fishermen gave up seining to adopt angling and trawling, and are satisfied with the results. All the fish of this division are sold on the Montreal markets at remunerative prices. After the spring freshets, the waters retire so suddenly that many fish are left dry on the low lands. A fishway of the Hockin model was built in the dam owned by the Grey Nuns at Châteauguay during the season, and this officer will endeavour to ascertain its efficiency in the spring. No violations of the fishery laws were reported. The total catch is valued at \$9,850.

BEAUHARNOIS DIVISION.

Overseer John Kelly states that there was a diminution in the fisheries under his charge, especially in bass and maskinongé, which he cannot account for, unless due to the excessive use of the seine in the past. The two guardians employed by him rendered valuable services in checking the illegal use of explosives to kill fish. The fish-ways are all reported in good repairs. These fisheries are valued at \$8,950 against \$11,000 last year.

LAPRAIRIE DIVISION AND VICINITY.

Overseer John Morris states that the number of fishermen was less than usual, as it was too late when they learned that soft fish permits could be obtained, but those who did fish in the spring, had the best catch on record for the last twenty years. Unfortunately there was no fall fishing to complete a good season, as the water was too low. Large quantities of young *dorés*, almost unfit for food, were sent to Montreal from other districts. The value of the total yield does not reach \$4,000.

VERCHÈRES DIVISION.

Overseer George Magnan reports a small catch, for even as early as July the waters were too low to fish. Nearly all the yield of this district, of which eels are the principal fish, is disposed of upon the Montreal markets. This officer is credibly informed that armed poachers have fished without licenses, but should other attempts be repeated, he has made arrangements to be notified of their reappearance, and will endeavour to capture them.

RICHELIEU COUNTY.

Overseer Narcisse Lavallée returns a small catch of fish about the same as last year, valued at \$1,290.

Overseer Picotin, of St. Francis River, states that fish are steadily decreasing in the said stream.

YAMASKA COUNTY AND RIVER.

Overseer Denis Shooner and J. Charboneau return a slightly increased yield of the fisheries in their districts, consisting chiefly of coarse fish. The entire catch amounts to \$7,500, being an increase of \$2,400 over the product of 1892.

NICOLET DIVISION.

Overseer George Boisvert reports an increased catch over that of last year of about \$2,000. The fisheries of this district consist mostly of coarse fish.

THREE RIVERS DIVISION.

Overseer Charles Vadeboncœur reports the fisheries of that district as having dwindled down to less than used to be returned for tom-cods alone. Even the latter fishery must have been a failure, as only 2,500 bushels are mentioned. The whole capture of fish does not reach \$3,000.

BERTHIER, MASKINONGÉ AND MONTCALM.

Overseers S. A. Grant and Wm. Ritchie return about the same quantity of fish as last year, valued at \$11,000, but made no report.

TERREBONNE DIVISION.

Overseer Joseph Lauzon states that with the exception of bass, fish are not decreasing. Hook and line fishermen did well. The fishery laws were well observed.

Overseer Jos. Filiatrault states that speckled trout seem as plentiful as ever, but not so many are caught since the prohibition of fishing for them through the ice, as it was mostly during those months that they were taken and shipped in a frozen state. However, numerous sportsmen visited these waters during the summer and quite a few were taken.

The total value of the Terrebonne fisheries is reckoned at \$4,315.

LAKE OF TWO MOUNTAINS DIVISION.

Overseer Théo. Sabourin and Julien Monpetit return about an average catch of fish, valued at \$2,780, but neither made any report.

RIVER BEAUDET DIVISION.

Overseer Joseph Boivin states that there are only three regular fishermen in his district, the others are only angling and trawling for amusement. These fisheries consisting chiefly of coarse fish are valued at \$3,450.

LOWER OTTAWA DIVISION.

Overseer R. W. Jones reports that about the same quantity of fish was taken as during the previous year. Some kinds of fish as shad yielded slightly more, others somewhat less than during 1892. As the fishermen in this division keep shifting from one place to another, it is more difficult to watch them, however, the close season was fairly well observed. There are no fish-ways in his district, mill-owners say, why should they be compelled to build fish-ways in their dams while there are none in the Carillon dam? The total capture is valued at \$4,660.

UPPER OTTAWA DIVISION.

Overseer Joseph Marion states that the number of men engaged in fishing this year was smaller than usual, several going to the Lower Ottawa below Carillon to seek better grades of fish. The thirty licensed fishermen fishing on the Ottawa during twenty-eight weeks, taking on an average 75 strings of fish each per week, which at $1\frac{1}{2}$ pounds each would give a total of 94,500 pounds mostly coarse fish, valued at \$4,000.

The Gatineau and other lakes of the county of Ottawa seem to be still well stocked with fish supply, and good catches have been made, especially in the large lakes of Thirty-one Mile and Pemichongan. The whole yield of these inland waters is valued at \$13,000.

PROVINCE OF QUE-

RETURN showing the Number and Value of Vessels, Boats and Fishing Materials, the
of Bonaventure, Province

RESTIGOUCHE SUBDIVISION

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.						Salmon, fresh in ice, lbs.				
	Vessels.			Boats.			Gill Nets.		Trap Nets.		Seines.						
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.		Fathoms.	Value.		
Head of Tide to Maguasha.....			\$		20	\$	400	24	5050	5050	45	\$	2250			\$	42666

CARLETON SUBDIVISION

Maguasha and Nouvelle					60	900	120	2500	1200			15	340	225	17000
Carleton					95	1425	220	3800	1900			25	750	500	12000
Maria					98	1470	250	3900	1960			24	720	480	18000
Total					253	3795	590	10200	5060			64	1810	1205	47000

BONAVENTURE SUBDIVISION

New Richmond					20	150	22	1400	700						4000
Black Capes					28	170	30	2800	1700						3700
Capelin					170	2000	150	6000	2600			12	360	200	
Bonaventure					210	3100	250	10000	5000			53	1225	790	1200
New Carlisle	1	10	100	2	35	350	35	1000	450			25	500	500	
Paspebiac					110	2200	240	1450	725			20	500	500	
Total	1	10	100	2	573	7970	727	22650	11175			110	2585	1990	8900

PORT DANIEL SUBDIVISION

Hope					55	1320	95	1035	602			10	245	289	1000
Nouvelle					59	1694	84	436	510			9	259	203	
Shigawake					70	691	72	876	391			2	48	60	
Port Daniel	1	25	400	4	182	3423	249	3019	1825			16	422	500	29025
L'Anse aux Gascons					175	5035	201	3616	2368			20	568	754	5200
Totals	1	25	400	4	541	12163	701	8982	5696			57	1542	1806	35225

TOTAL FOR COUNTY

Restigouche Subdivision					20	400	24	5050	5050	45	2250				42666
Carleton					253	3795	590	10200	5060			64	1810	1205	47000
Bonaventure	1	10	100	2	573	7970	727	22650	11175			110	2585	1990	8900
Port Daniel	1	25	400	4	541	12163	701	8982	5696			57	1542	1806	35225
Totals	2	35	500	6	1387	24328	2042	46882	26981	45	2250	231	5937	5001	133791

BEC—Gulf Division.

Number of Men employed, with the Kinds and Quantities of Fish, &c., in the County of Quebec, for the Year 1893.

Head of Tide in Restigouche to Maguasha).

KINDS OF FISH.														FISH PRODUCTS.		TOTAL VALUE.			
Herring, salted, barrels.	Herring, fresh or frozen, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved (in cans), lbs.	Lobsters, preserved in cans, lbs.	Lob's, alive or fresh, tns.	Cod, dried, cwt.	Cod, tong & sod's, brls.	Hake, dried, cwt.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Clams, barrels.	Eels, barrels.	Tom Cod or Frost Fish, lbs.	Fish Oils, galls.	Fish used as bait, brls.	Fish used as manure, brls.
						2					2000		125724		5	72600			

(Maguasha to Big Cascapedia River).

300	4000	15	.....	.....	.....	250	.....	.....	.....	.....	.....	.....	60	5	.....	50	30	4900	9,030 00
450	7500	35	.....	.....	.....	540	.....	.....	.....	.....	.....	.....	10	10	.....	120	60	22870	19,168 00
1200	8900	40	.....	.....	.....	1050	.....	.....	.....	.....	.....	.....	25	.....	.....	180	120	40360	35,145 00
1950	20400	90	.....	.....	.....	1840	.....	.....	.....	.....	.....	.....	60	40	.....	350	210	68130	63,343 00

(Cascapedia to Paspebiac Point).

100	1000	.....	.....	.....	.....	1100	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	15	400	1,500 50
150	1500	.....	.....	.....	.....	588	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	600	6,701 00
800	3000	2000	13920	.....	.....	2506	.....	.....	.....	.....	600	.....	.....	.....	.....	900	279	6000	20,937 30
1500	7000	600	10560	.....	.....	600	4	10	.....	700	.....	.....	150	.....	.....	1875	600	7400	17,625 40
200	1000	.....	3860	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	420	175	3000	3,390 90
400	1500	.....	.....	.....	.....	4000	5	150	150	.....	.....	.....	350	.....	.....	3000	1100	500	25,705 00
3150	15000	2600	28340	.....	.....	8200	9	150	160	.....	1300	.....	500	.....	.....	6215	2173	17900	75,860 10

(Paspebiac Point to Point Maquereau).

306	.....	.....	.....	.....	.....	1691	.....	.....	.....	.....	.....	.....	.....	.....	.....	1000	558	300	10,573 50
112	.....	.....	36846	.....	.....	588	.....	.....	.....	.....	.....	.....	.....	.....	.....	483	235	89	8,898 64
189	.....	.....	23400	.....	.....	372	.....	.....	.....	.....	.....	.....	.....	.....	.....	396	594	145	6,922 40
215	.....	.....	28860	.....	.....	3706	.....	.....	.....	.....	.....	.....	.....	.....	.....	1922	1380	722	30,689 70
499 8400	.....	.....	16540	.....	.....	2212	.....	.....	.....	.....	.....	.....	.....	.....	.....	1400	1763	.....	18,843 60
1321 8400	.....	.....	105646	.....	.....	8569	.....	.....	.....	.....	.....	.....	.....	.....	.....	5200	4530	1256	75,927 84

OF BONAVENTURE.

1950	20400	90	.....	.....	2	1840	.....	.....	2000	.....	125724	.....	5	72600	.....	350	219	68130	18,779 40
3150	15000	2600	28340	.....	.....	8200	9	150	160	.....	1300	.....	500	.....	.....	6215	2173	17900	63,343 00
1321 8400	.....	.....	105646	.....	.....	8569	.....	.....	.....	.....	.....	.....	.....	.....	.....	5201	4530	1256	75,927 84
6421 8400	35400	90	2600	133986	2	18609	9	150	160	2000	1300	125724	560	45	72600	11766	6913	87286	233,910 34

RETURN showing the Number and Value of Vessels, Boats and

GRAND RIVER SUBDIVISION

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.					
	Vessels.				Boats.			Gill-Nets.		Seines.		
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Fathoms.	Value.
		£	£			£			£			£
Newport.....					137	7400	304	5880	2345	5	240	150
Grand Pabos.....					20	1000	50	800	200	2	100	100
Little Pabos.....					33	1300	70	1200	500	4	80	80
Little River, west.....					15	650	40	800	350	1	20	30
Grand River.....					75	3350	163	3342	1370	4	100	100
Little River, east.....					55	2250	110	2400	600	3	80	75
Cape Cove.....					87	4100	162	3700	1370	10	263	220
Bonaventure Island.....					18	1200	38	980	100			
Perce.....	3	160	3500		101	4600	202	4200	1400	5	125	110
Corner of Beach.....	1	80	2000	4	8	120	7	1500	450	1	25	36
Totals.....	4	240	5500	4	549	25970	1146	24802	8685	35	1033	901

GASPÉ SUBDIVISION

Barachois.....					155	6959	177	1730	1630	10	250	350
Mal Baie.....					55	1710	68	1210	610	3	84	125
Point St. Peter.....					67	1660	92	2220	745	4	112	140
Chien Blanc.....					62	1400	70	960	500	3	75	80
Bois Brûlé.....					30	1000	28	320	160			
Seal Cove.....					33	560	31	665	435			
Douglstown.....					85	2800	134	1775	1175	8	240	160
Sandy Beach.....					32	800	41	2110	2000			
Gaspé, North and South.....					36	380	40	3264	2300	16	480	816
Peninsula.....					18	290	28	1969	1610			
Cape Ozo.....					26	340	36	1292	1092	1	20	8
Little Gaspé.....					15	250	14	394	284			
Grande Grève.....					22	520	22	716	526	5	150	200
Ship Head.....					46	980	48	970	580	2	40	50
Cape Rosier.....					60	1140	80	800	200	2	50	50
Totals.....					742	20789	909	20395	13847	54	1601	1979

Fishing Materials, &c., in the County of Gaspé, &c.—Continued.

(Point Maquereau to Barachois, Malbaie).

KINDS OF FISH.												FISH PRODUCTS.		Total Value.	
Salmon, salted, brls	Salmon, fresh, in ice, lbs.	Salmon, preserved in ice, lbs.	Herring, salted, brls.	Herring, fresh or frozen, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved (in cans), lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, cwt.	Halibut, lbs.	Smelts, lbs.	Fish Oils, galls.	Fish used as bait, brls.	
6500			535	50000			42000	7550	13	53	2100	2500	3420	3015	50,603 50
10000			158	25000		4500		2000	3	8			1500	245	13,526 50
3000			120				2500	4200	8	25	200	700	1600	770	22,407 50
			79				20000	1100	2	10			500	420	8,990 50
			208		4		8000	7080	11	15	402	3000	4890	2765	40,428 20
			110					4500					2250	1055	23,227 50
			185				27500	8400	3	1300	300	500	3700	4190	54,882 50
			18					1800		50			800	810	9,891 00
5500	500		90		1		50000	15500		100	800		5000	2350	84,331 00
	16000		25				4000	700					500	88	6,554 50
2	25000	16500	1528	75000	5	4500	154000	52830	40	1561	3802	6700	24160	15708	314,842 70

(Barachois of Malbaie to Cape Gaspé).

1100	295			34868	6570		2000	3270	2290	40,837 02	
864	160				7818			2080	1060	38,495 80	
320	120				3100	2		1940	1150	17,075 00	
	50				1780			900	500	9,345 00	
	80			11280	960			480	320	6,931 20	
447	60			7680	400			200	200	3,614 60	
1240	350			16704	3200			1600	1200	21,001 56	
6468	140	5			293			145	85	3,497 60	
17213	10						79500			7,462 60	
10891	80	10			140			70	50	3,411 20	
4039	100			9936	500			250	250	5,373 84	
1100	55				240			130	120	1,779 50	
1285	130				850			430	280	5,259 00	
1700	175				1630			850	540	9,612 50	
	300				1600			800	400	9,470 00	
46667	2105	15		80468	29081	2		81500	13145	8445	83,166 42

RETURN showing the number and Value of Vessels, Boats and

FOX RIVER SUBDIVISION

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.					
	Vessels.				Boats.			Gill nets.		Seines.		
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Number.	Fathoms.	Value.
			\$			\$			\$			\$
Anse à Louise					70	1,200	31	1,444	720	1	30	10
Jersey Cove ..					36	540	25	750	270			
Anse à Grisfonds.....					140	3,400	24	3,000	1,800	6	180	280
Fox River.....					160	4,000	60	3,900	2,000	6	190	280
Little Fox River.....					30	450	38	700	290			
Little Cape.....					40	800	175	1,320	660			
Echourie and Big Cove..					23	345	150	575	280			
Pointe Jaune					18	325	46	480	200			
Anse à Valeau.....					26	468	75	500	230			
Totals.....					543	11,528	604	12,669	6,450	13	400	570

MONT'S LOUIS SUBDIVISION

Grand Etang	22	275	22	600	300	2	80	60
St. Yvon.....	40	700	38	1,150	725			
Chlorydorme.....	46	850	43	1,300	760			
Petite Anse.....	22	180	22	600	250			
Frigate Point.....	20	100	20	450	200			
Grande Vallée	24	200	30	300	110			
Little Vallée,	42	700	44	1,150	600	1	30	50
Magdalen River.....	20	250	28	546	175			
Manche d'Epée.....	10	80	15	244	65			
Gros Mâle.....	20	140	29	300	80			
Anse Pleureuse.....	20	175	25	400	150			
Mont Louis.....	36	520	40	725	375	2	80	55
Rivière à Pierre.....	10	60	11	180	50			
Totals.....	332	4,230	367	7,945	3,840	5	190	165

STE. ANNE DES MONT'S SUBDIVISION

Claude River	18	340	36	560	560			
Marsouins.....	7	210	14	260	260			
Martin River.....	6	200	12	200	200			
Ste. Anne	55	1,900	110	1,620	1,620	2	120	80
Cape Chatte.....	21	1,050	42	1,240	1,240			
Totals.....	107	3,700	214	3,880	3,880	2	120	80

Fishing Material, &c., in the County of Gaspé. &c.—Continued.

(Cape de Rosier to Fame Point).

KINDS OF FISH.											FISH PRODUCTS.			TOTAL VALUE.	
Salmon, salted, brls.	Salmon, fresh in ice, lbs.	Herring, salted, brls.	Mackarel, salted, brls.	Cod, dried, cwt.	Cod, Tongues and Sounds, brls.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Clams, brls.	Eels, brls.	Tom-cod or Frost Fish, lbs.	Fish oils, galls.	Fish used as bait, brls.		
.....	350	2	2,900	10	50	.....	6,000	.....	.....	.....	2,000	850	100	\$ 17,653 00
.....	180	14	1,400	10	15	.....	2,000	.....	.....	.....	900	265	100	8,466 00
.....	520	550	2	6,700	15	20	.....	15,000	.....	.....	.....	6,200	1,600	150	39,432 00
.....	700	4	9,000	15	60	.....	20,000	.....	.....	.....	8,000	2,150	200	52,591 00
.....	160	5	1,125	8	10	.....	3,000	.....	.....	.....	1,000	200	100	7,017 50
.....	200	6	2,500	12	10	.....	4,000	.....	.....	.....	3,700	3,500	150	19,594 00
.....	60	4	1,080	10	20	.....	1,800	.....	.....	.....	850	170	80	6,171 00
.....	100	4	1,250	8	15	.....	2,000	.....	.....	.....	1,000	175	100	7,176 00
.....	150	8	1,400	10	30	.....	3,000	.....	.....	.....	1,200	330	100	8,617 00
....	520	2,450	49	27,355	98	230	.....	56,800	.....	.....	.....	24,850	9,240	1,080	166,717 50

(Fame Point to Rivière à Pierre).

		45		920	2	25		3,000		3		800	160		5,340 00
1	200	80		1,650	3	30		2,700				1,000	300	30	9,111 00
1	1,400	125		1,800	4	30		7,000				1,100	450	20	10,928 50
		50		500	2	10		1,800				300	175	10	3,097 50
		40		400	2	3		1,000				250	100		2,360 50
	400	40		300	1	1	220	2,000				150	80		2,025 50
		100		1,700	1	4		5,000				900	250		9,359 00
	1,100	60		400	1			300				100	75		2,482 50
	600	60		150		1		600				350	60		1,358 50
1		90		550	1	2		600				350	100		3,263 00
	2,550	65		550				400				350	100		3,607 50
	1,000	200		700				600				400	200		4,770 00
		55		200				200				150	50		1,302 50
3	7,250	1,010	....	9,820	17	106	220	25,200	....	3	..	6,200	2,100	60	59,006 00

(Rivière à Pierre to Cape Chatte).

		78		460	2			415		66	110	100	50		2,704 80
		56		238	1			300		36	70	65	26		1,503 30
		50		208	1			318		41	60	60	32		1,334 85
	820	720		1,700	3		3,200	2,150	9	270	240	250	105		12,201 00
		350		500	2		1,200	800	6	150	120	200	80		4,470 50
....	820	1,254	....	3,106	9	....	4,400	3,983	15	563	600	675	293		22,214 45

RETURN showing the Number and Value of Vessels, Boats and
MAGDALEN ISLANDS

NAME OF DISTRICT.	FISHING VESSELS AND BOATS.							FISHING MATERIAL.						KINDS OF FISH.			
	Vessels.				Boats.			Gill-Nets.		Trap-Nets.		Seines.		Salmon, salted, bris	Salmon, fresh, in ice, lbs.	Salmon, preserved in cans, lbs.	
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.	Fathoms.				Value.
		¢	¢	¢		¢	¢		¢								
Amherst Island..	4	128	2600	85	133	5320	293	22120	14816	..	..	8	1645	2555	..	..	..
Entry Island.....	..	..	..	..	5	200	14	1160	464	..	..	..	..	..	..	..	..
Le Moulin.....	..	..	..	..	13	520	33	2400	960	..	..	..	..	..	..	..	..
Bryon Island.....	..	..	..	..	60	1800	120	160	480	..	..	..	..	..	..	..	..
Grosse Isle and Old Harry.....	..	..	..	..	30	1200	66	420	256	..	..	..	..	..	..	..	..
Grand Entry.....	..	..	..	..	10	300	25	225	90	1	300	..	..	..	..	..	..
Wolf Island.....	..	..	..	..	80	240	180	..	..	..	..	..	..	..	..	..	..
S. Beach, Pointe Basse and Little Brig.....	..	..	..	..	53	1590	128	1300	520	..	..	..	..	..	..	..	..
Etang du Nord...	..	..	..	..	98	5880	260	6080	2432	1	300	3	375	600	..	..	..
House Harbour...	12	540	17000	96	4	120	10	..	..	..	..	1	120	250	..	..	..
Totals.....	16	668	19600	181	486	17170	1129	33865	20018	2	600	12	2140	3405	..	..	..

TOTALS FOR THE

Grand River Sub- division.....	4	240	5500	4	549	25970	1146	24802	8685	..	..	35	1033	901	2	25000	16500
Gaspé Subdivision	..	..	..	..	742	20789	909	20395	13847	..	..	54	1601	1979	..	46667	..
Fox River “	..	..	..	..	543	11528	624	12669	6450	..	..	13	400	570	..	520	..
Magdalen Riv. “	..	..	..	..	332	4230	367	7945	3840	..	..	5	190	165	3	7250	..
Ste. Anne’s “	..	..	..	..	107	3700	214	3880	3880	..	..	2	120	80	..	820	..
Magdalen Islands Subdivision....	16	668	19600	181	486	17170	1129	33865	20018	2	600	12	2140	3405	..	..	..
Totals.	20	908	25100	185	2759	83387	4389	103556	56720	2	600	121	5484	7100	5	80257	16500

Fishing Material, &c., in the County of Gaspé, &c.—Continued.

SUBDIVISION.

KINDS OF FISH.													FISH PRODUCTS.				Total Value.	
Herring, salted, brls.	Herring, fresh or frozen, lbs.	Mackerel, salted, brls.	Mackerel, fresh or preserved, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Clams, brls.	Eels, brls.	Tom-cod, lbs.	Fish Oils, galls.	Seal-skins, No.	Fish used as bait, brls.		Fish used as manure, brls.
1670	7000	1862	119664	3011	30	550				6400	235	85		2050	1600	1670	625	\$ [cts.
105		121	12960	50							8			40	25	80		74,162 96
173		215		486	5	80					22			398	240	140	140	4,413 15
780		1800	72000	250		50					60			190	2000	660		7,154 70
436		665	48528	100							40			70	625	350		43,956 00
180		180	156912	125		15					20			75	100	160		20,050 17
1000		1000	9600								80			80	80	200		26,407 68
																		20,676 00
550		790	42720	195		20					70			100	189	495		21,832 05
980		1352	180916	3000	10	150					150			2200	150	850	300	66,033 74
200		60									6			41636	5400	40		25,234 40
6074	7000	8045	643300	7217	45	865				6400	691	85		46839	10409	4645	1065	309,920 85

COUNTY OF GASPÉ.

1528	75000	5	4500	154000	52830	40	1561	3802	6700					24160		15708		314,842 70
2105		15		80468	29081	2			81500					13145		8445		183,166 42
2450		49			27355	98	230	56800						24850		9240	1080	166,717 50
1010					9820	17	106	220	25200			3		6200		2100	60	59,006 00
1254					3106	9		4400	3983		15	563		600		675	293	22,214 45
6074	7000	8045		643300	7217	45	865		6400	691	85			46839	10409	4645	1065	309,920 85
14421	82000	8114	4500	877768	129409	211	2762	4620	89785	94600	706	88	563	115794	10409	40813	2498	1055867 92

RETURN showing the Number and Value of Vessels and Boats engaged in the Number of Men employed in the Fishing Industry of the

GODBOUT SUBDIVISION

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.									
	Vessels.				Boats.		Gill Nets		Trap Nets.	Weirs.		Seines.				
	No.	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.	No.	Value.	No.	Fathoms.	Value.	
			¢			¢		¢		¢		¢			¢	
Point aux Outardes.	1	10	300	4	3	60	6	300	105		3	60				
Manicouagan.	1	12	350	3	2	150	4	300	75							
Godbout.					17	340	19	1500	1500				4	300	300	
Pointe des Monts.					5	100	5	750	750	1	300		1	100	90	
Trinity Bay.					12	240	12	1025	1025							
Caribou Islands.	3	46	1800	6	28	560	29	1625	1625				1	60	40	
Egg Island.					10	425	19	300	250				1	40	30	
English Point.					37	740	55	2000	1900				1	45	45	
Pentecost.					15	300	21	300	200							
Cailles Rouges.					7	150	14	210	175				1	45	50	
Totals.	5	68	2450	13	136	3065	184	8310	7605	1	300	3	60	9	590	555

MOISIE SUBDIVISION

Jambous.....	2	51	700	8	13	380	12	398	295			1	175	300
Ste. Marguerite.....					2	75	5	790	1200			1	40	20
Seven Islands.....	3	55	1700	10	24	945	40	1315	1243			4	180	185
Moisie.....	2	73	800	8	28	1475	56	5525	4800			5	250	550
Cormorant Point.....	1	19	400	3	2	25	2	75	50					
Pigou.....	1	14	300	2	4	200	8	150	130			1	25	40
Totals.....	9	212	3900	31	73	3100	123	8253	7718			12	670	1095

MINGAN SUBDIVISION

Little River.....					11	550	25					1	60	100
Chaloupe.....					9	400	19	350	160			1	40	80
Sheldrake.....					42	2495	84	400	200	2	700	1	50	90
Thunder River.....	1	61	1500	4	134	3500	300	300	150	4	1300	4	256	400
The Dock.....					27	1600	50					1	70	70
Ridge Point.....					23	1500	50					1	50	90
Jupitagan.....					3	150	6	300	200			1	30	50
Magpie.....					125	3400	280	300	200			3	200	400
St. John's.....					108	3200	160	1500	1500			2	180	350
Long Point.....					15	550	35	200	100			1	150	200
Mingan.....					2	140	4	200	200					
Romaine.....					1	40	1	60	50					
Esquimaux Point.....	17	682	15300	120	140	3000	210	1500	1000			17	1200	2500
La Corneille.....					2	100	2	200	150					
Totals.....	18	743	16800	124	642	20625	1226	5310	3910	6	2000	33	2286	4330

Fisheries, Fishing Materials, and the Kinds and Quantities of Fish, as well as the County of Saguenay, Province of Quebec, for the Year 1893.

(Manicouagan to Jambons).

KINDS OF FISH.										FISH PRODUCTS.					TOTAL VALUE.		
Salmon, salted, brls.	Salmon, fresh in ice, lbs.	Herring, salted, brls.	Herring, smoked, lbs.	Mackerel, salted, brls.	Cod, dried, cwt.	Cod, Tongues and Sounds, brls.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Clams, brls.	Fish Oils, galls.	Seal Skins.	Fish used as Bait, brls.	Fish used as Manure, brls.	\$	cts.	
		15	1000						10000		255	85		40		815	75
		35							1200		330	110		10		492	00
5	20540	207		9	250		750	1200			1435	237	60			7525	75
	7502	60		1	36			1000			1406	274	59			3039	80
	17679	38			220		300	3350			230	2	15			5178	80
	21920	69		1	665	5		4450			685	5	100			8626	25
		188			633		300	1300			633		20			4137	70
	8853	540			1436	15		5950			1436		130	50		12202	00
		35			340	2	600	1800			340		15			2106	00
	5228	30			242		150	900			293	17	15	5		2538	05
5	81722	1217	1000	11	3822	22	2100	19950	11200	...	7043	730	414	105		46662	10

(Jambons to Pigou).

		187	5000		1658	4		1600		15	325	6	120	12	9001 00
	8613				200		400				80		30		2739 60
	14594	37			1501	4		7000		30	1755	143	700	50	12685 55
	131403	12			3360	3	1600	9200		20	2260	38	1000	60	45146 10
		4			50					5	30		20		310 00
					165			800		10	120	4	50	5	1003 00
	154610	240	5000		6934	11	2000	18600		80	4570	191	1920	127	70885 25

(Pigou to Watsheeshoo).

1					800			1500		500		350	60		4521 00
2					240			800		160		120	20		1446 00
4					7424			500		4550		500	145		36164 50
3					5000			800		3670		700	150		25221 00
					2500			2000		2000		1700	100		14850 00
					2000			1500		1500		650	80		10765 00
6					300			1100		200		100	30		1801 00
44	250				7600			180		5000		3000	300		42697 00
	40000				5000			800		3670		2500	500		36048 00
19					1740			1500		875	40	900	150		10109 00
22	3200				15		200			510	150	5			1478 50
20					15		600			10		5			459 00
		320			5000			2500		15690	4120	4000			41616 00
5										60	20				129 00
126	43200	570			37634		800	13180		38395	4330	14530	1535		227305 00

RETURN showing the Number and Value of Vessels, Boats and Fishing
NATASHQUAN SUBDIVISION

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING				
	Vessels.				Boats.			Gill Nets.		Trap Nets.	
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.
		\$				\$			\$		\$
Watsheeshoo.....					2	30	3	100	50		
Nabissippi.....					1	20	2	200	70		
Agwanus.....	1	17	300	6	15	800	32	500	150		
Isle à Michon.....					9	360	18	100	50		
Natashquan Harbour.....					38	2,280	80	160	80		
Little Natashquan.....	3	70	900	18	22	1,200	50	1,300	480		
Natashquan River.....					10	180	20	2,200	760		
Kegashka.....					5	100	7	500	400		
Romaine.....					8	350	12	800	400		
Totals	4	87	1,200	24	110	5,320	224	5,860	2,440		

ST. AUGUSTINE SUBDIVISION

Wolf Bay.....					4	110	4	150	150		
Etamamiu River.....					1	10	2	200	300		
Point à Mourier.....					1	75	2	150	100		
Harrington.....					37	865	45	480	388	5	1,050
Little Meccatina.....					20	448	22	520	460	3	730
Whale Head.....					33	810	39	360	257	6	1,500
Mutton Bay.....					4	100	5	100	128	2	500
Big Meccatina.....					8	200	9	412	361	1	350
La Tabatière.....					5	300	2	250	250		
Big Meccatina Island.....					3	80	3	424	288		
Kikapoe.....					4	55	4	548	382		
Whale Head East.....					4	80	7	400	300		
St. Augustin.....					3	65	3	351	330		
Sandy Island.....					3	48	3	391	280		
Caucasippi.....					1	12	1	150	75		
Pointe à Giroux.....					1	40	2	180	175		
L'Anse a Portage.....					1	36	1	150	150		
Canso.....					4	100	7	117	100	1	300
Chicatica.....											
Totals.....					137	3,434	161	5,333	4,474	18	4,430

Materials, &c., in the County of Saguenay, &c.—Continued.

(Watsheeshoo to Coacoashoo).

MATERIAL.			KINDS OF FISH.							FISH PRODUCTS.			TOTAL VALUE.
Seines.			salted, salmon, brls.	salted herring, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Trout, lbs.	Halibut, lbs.	Clams, brls.	Fish Oils, galls.	Seal skins, No.	Fish used as bait brls.	
No.	Fathoms.	Value.											
		\$			2,880		200						\$ cts.
2	50	60	24			940	300	700		800		150	403 20
1	30	25	34			800		600		650		110	404 00
4	130	75	16			2,600							5,419 00
3	90	60	1	25		1,600		1,200		2,000		450	4,341 00
			41	250		115	600	1,000	12	7,230	887	260	13,423 50
			172	15		700	200			110		30	13,531 75
1	30	20	12	30		175	700			240	34	30	3 506 00
			34				800			150	50		1,368 00
													746 50
11	330	240	334	320	2,880	6,230	2,600	3,700	12	11,180	971	1,030	43,142 95

(Coacoachoo to Chicatica).

.....	.....	.....	3	.....	.....	266	.....	.....	.....	300	20	50	1,465 00
.....	.....	.....	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	384 00
.....	.....	.....	2	.....	.....	.....	.....	.....	.....	250	50	.....	194 50
6	1,800	500	1	.....	.....	2,670	.....	.....	50	2,150	30	400	13,778 50
3	165	100	6	.....	.....	2,300	.....	.....	.....	3,400	306	350	12,713 50
7	2,000	550	9	.....	.....	3,220	.....	.....	.....	3,350	70	350	16,586 50
2	300	150	1	.....	.....	400	.....	.....	.....	390	18	50	2,069 50
2	480	150	12	.....	.....	500	.....	.....	.....	7,000	1,336	75	7,024 50
.....	.....	.....	5	.....	.....	75	.....	.....	.....	800	150	10	940 00
.....	.....	.....	16	.....	.....	10	.....	.....	.....	1,000	200	.....	951 00
.....	.....	.....	18	.....	.....	20	.....	.....	.....	15	.....	5	391 50
.....	.....	.....	16	.....	.....	300	.....	.....	.....	750	100	60	2,121 00
.....	.....	.....	4	.....	.....	150	.....	.....	.....	130	.....	30	836 00
.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	192 00
.....	.....	.....	4	.....	.....	75	.....	.....	.....	50	.....	15	444 00
.....	.....	.....	8	.....	.....	120	.....	.....	.....	100	.....	30	753 00
.....	.....	.....	3	.....	.....	20	.....	.....	.....	15	.....	5	151 50
1	75	30	4	.....	.....	350	.....	.....	.....	300	.....	65	1,856 50
21	4,820	1,480	148	.....	.....	10,476	.....	.....	50	20,000	2,280	1,495	62,852 50

RETURN showing the Number and Value of Vessels, Boats and
BONNE ESPÉRANCE SUBDIVISION

DISTRICTS.	FISHING VESSELS AND BOATS.						FISHING MATERIAL.					
	Vessels.				Boats.		Gill Nets.		Trap Nets.		Seines.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Fathoms.	Value.	Number.	Value.	Number.	Fathoms.
			¢			¢		¢		¢		¢
Bull Cove.....					6	180	6	520	260			
Bay of Rocks.....					12	300	20	300	150	2	400	1
Dog Islands.....					12	400	8	800	400			100
Old Fort Islands.....					22	680	58	800	400	2	400	2
Burnt Island.....					20	1000	30	1500	750	2	400	110
Bonne Espérance.....	1	40	600	4	80	4000	80	1500	750	4	800	8
Pidgeon Island.....					18	1000	24	300	150	2	500	2
Stick Point.....					8	400	8	600	300	1	200	700
Salmon Bay.....					70	4000	80	300	150	3	600	6
Little Fishery.....					4	150	3	200	100			820
Five League.....					6	200	8	600	300	1	100	940
Middle Bay.....					30	1600	50	200	100	2	400	
Belles Amours.....					3	90	2	200	100			1200
Bradore Bay.....					30	1000	50	2000	1000	3	600	4
Long Point.....					20	800	40	2000	1000	2	400	1000
Greenly Island.....					50	4000	100	1000	500	1	300	11
Blancs Sablons.....					5	300	10	200	100			2100
Totals.....	1	40	600	4	396	20100	577	13020	6510	25	5100	39

THE ISLAND

Fox Bay.....					14	700	16	700	300			1
Salmon River.....					12	240	20	250	200			200
Mauzerolle.....					10	300	18	200	150			
Capelin Bay.....					10	300	15	300	200			
Macdonald's Cove.....					20	600	40	500	300			
English Bay.....					18	360	20	500	300			
Strawberry Cove.....					20	300	25	350	200			
Shallop Creek.....					3	100	2	250	200			
Goose Point.....					10	150	20	100	100			
Cormorant Point.....					12	240	30	100	100			
Totals.....					129	3290	206	3250	2050			1

Fishing Material, &c., in the County of Saguenay, &c.—Continued.

(Chicatica to Blancs Sablons).

KINDS OF FISH.								FISH PRODUCTS.					VALUE.
Salmon, salted, barrels.	Herring, salted, barrels	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Bass, lbs.	Fish Oils, galls.	Seal skins, No.	Fish used as bait, brls.	Fish used as manure, barrels.	Fish guano, tons.	
			100	800				100	40	12			\$ cts.
			500	800				280	15	210			638 00
20			300	1400				800	160	40			2,775 75
			1000	1200				1150	90	150			2,390 00
			1700					1500	40	500			5,417 50
60			8000	3600				6000		1400			9,050 00
			1500					1300	30	260			41,820 00
			1000	800				850	30	30			7,697 50
			3500					2000		1200			5,002 50
18			100					260	40	15			18,350 00
			100					1060	160	15			914 50
			2000					1200		750			1,096 50
			50					60	10	10			10,605 00
			2500					3000	300	600			276 50
			2500					3400	350	500			13,725 00
			3000					4000	400	550			13,797 50
			300					1200	200	15			16,425 00
													2,102 50
98			28150	8600				28160	1865	6257			152,083 75

OF ANTICOSTI.

2	50		210	500	350			195	15	50			1,458 75
7	25	45000		300				477	137	100			7,066 55
	110		515		1000			257		100			3,165 30
	135	12500	500		750			250		200			5,082 50
4	300		1500	350	2000			780	20	250			9,111 00
	100		430		1500			275	50	100	200		2,957 50
	100		475		1500			287	30	100	200		3,139 80
12				400				50	10				264 50
		50000								100			7,150 00
		75000								100			10,650 00
25	820	182500	3630	1550	7100			2571	262	1100	400		50,045 90

RETURN showing the Number and Value of Vessels, Boats and Fishing Material, &c., in the County of Saguenay and the Gulf Division, for the Year 1893.

FISHING VESSELS AND BOATS.					FISHING MATERIAL.					KINDS OF FISH.											
DISTRICTS.	Vessels.				Boats.		Gill Nets.		Trap Nets.		Seines.		Salmon.			Herring.					
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.	Value.	No.	Value.	No.	Fathoms.	Value.	Salted, brls.	Fresh in ice, lbs.	Preserved in cans, lbs.	Salted, brls.	Fresh or frozen lbs.	Smoked, lbs.	
Subdivisions.																					
Godbout.....	5	68	2450	13	136	3065	184	8310	7605	1	300	3	60	9	590	555	5	81722	1217	1000	
Moisie.....	9	212	3900	31	73	3100	123	8253	7718	...	...	...	...	12	670	1095	...	154610	240	5000
Mingan.....	18	743	16800	124	642	20625	1226	5310	3910	6	2000	...	...	33	2286	4330	126	43200	570	...
Nauyasquan.....	4	87	1200	24	110	5320	224	5860	2440	...	...	...	...	11	330	240	334	...	320	...
St. Augustin.....	...	...	...	...	137	3434	161	5333	4474	18	4430	...	...	21	4820	1480	148	...	...	...
Bonne Esperance.....	1	40	600	4	396	20100	577	13020	6510	25	5100	...	...	39	8030	8490	98	...	...	...
Anticosti.....	...	...	...	...	129	3290	206	3250	2050	...	...	...	...	1	200	75	25	...	820	...
Total.....	37	1150	24950	196	1623	58934	2701	49336	34707	50	11830	3	60	126	16926	16265	736	279532	3167	6000	
TOTAL FOR GULF DIVISION—PROVINCE OF QUEBEC.																					
Bonaventure County.....	2	35	500	6	1387	24328	2042	46882	26981	45	2250	231	5937	5001	...	133791	6421	8400	35400
Gaspé.....	20	908	25100	185	2759	83387	4389	103556	56720	2	600	121	5414	7100	5	80257	14421	82000	6000
Saguenay.....	37	1150	24950	196	1623	58934	2701	49336	34707	50	11830	3	60	126	16926	16265	736	279532	3167
Total.....	59	2093	50550	387	5769	166649	9132	199774	118408	97	14680	3	60	478	28277	28306	741	493580	24009	90400	41400

RETURN showing the Number and Value of Vessels, Boats and Fishing Materials, &c., in the County of Saguenay and the Gulf Division, for the Year 1893.

DISTRICTS.	KINDS OF FISH.													TOTAL VALUE.				
	FISH PRODUCTS.																	
	Mackerel.	Lobsters.		Cod.		Hake, dried, cwt.	Haddock, cwt.	Trout, lbs.	Halibut, lbs.	Smelts, lbs.	Clams, brls.	Eels, brls.	Tom-cod or frost fish, lbs.		Fish oils, galls.	Seal skins, No.	Fish used as bait, brls.	Fish used as manure, brls.
	Salted, brls.	Fresh or pre- served, (in cans), lbs.	Preserved in cans, lbs.	Alive or fresh, tons.	Dried, cwt.	Tongues and Sound, lbs.												\$ cts.
<i>Subdivisions.</i>																		
Godbout.	11				3822	22		2100	19950	11200				7043	730	414	105	46,682-10
Moisie.					6934	11		2000	18000		80			4570	191	1920	127	70,885 25
Mingan.					37634			800	13180					38395	4330	14530	1535	227,305 00
Natashquan.					6230			2600	3700		12			11180	971	1030		43,142 95
St. Augustin.					10476						50			20000	2280	1495		62,852 50
Ronne Esperance.					28150			8006						28100	1865	6257		152,083 75
Anticosti.					3630			1550	7100					2571	262	1100	400	50,045 90
Total	11				96876	33		17650	62530	11200	142			111919	10629	26746	2167	652,977 45
TOTAL FOR GULF DIVISION—PROVINCE OF QUEBEC.																		
Ponaventure County.	90	2000	133986	2	18609	9	150	2000	1300	125724	560	45	72000	11766		6913	87286	233,910 34
do	8114	4500	877768		129409	211		4620	89785	94000	706	88	563	115794	10409	40813	2498	1,055,867 92
do	11		185380		96876	33		17650	62530	11200	142			111919	10629	26746	2167	652,977 45
Total	8215	7100	1197134	2	244894	253	150	24270	153615	231524	1408	133	73163	239479	21038	74472	91951	1,942,755 71

RECAPITULATION.

YIELD and Value of the Gulf Division, Province of Quebec, for the Year 1893.

Description.	Quantity.	Prices.		Value.	
		\$	cts.	\$	cts.
Salmon, salted.....	Brls. 741	16	00	11,856	00
do fresh in ice.....	Lbs. 493,580	0	20	98,716	00
do in cans.....	do 16,500	0	15	2,475	00
Herring, salted.....	Brls. 24,009	4	50	108,040	50
do fresh.....	Lbs. 90,400	0	01	904	00
do smoked.....	do 41,400	0	02	828	00
Mackerel, salted.....	Brls. 8,215	14	00	115,010	00
do fresh.....	Lbs. 7,100	0	12	852	00
Lobsters, canned.....	do 1,197,134	0	14	167,598	76
do fresh.....	Tons 2	40	00	80	00
Cod, salted.....	Cwt. 244,894	4	50	1,102,023	00
do tongues and sounds.....	Brls. 253	10	00	2,530	00
Hake, dried.....	Cwt. 150	3	00	450	00
Haddock, dried.....	do 2,922	3	50	10,227	00
Trout.....	Lbs. 24,270	0	10	2,427	00
Halibut.....	do 153,615	0	10	15,361	50
Smelt.....	do 231,524	0	05	11,576	20
Clams.....	Brls. 1,408	5	00	7,040	00
Eels.....	do 133	10	00	1,330	00
Tommy cods.....	Lbs. 73,163	0	05	3,658	15
Fish oils.....	Galls. 239,479	0	40	95,791	60
Seal skins.....	Pieces 21,038	1	25	26,297	50
Fish for bait.....	Brls. 74,472	1	50	111,708	00
Fish for manure.....	do 91,951	0	50	45,975	50
Total value for 1893.....				1,942,755	71
do do 1892.....				1,915,954	36
Increase for 1893.....				26,801	35

STATEMENT showing Number of Men, with Quantity and Value of Material
Employed in Gulf Division Fisheries, Season of 1893.

Description.	Values.
	\$ cts.
59 vessels of 2,093 tons, manned by 387 men.....	50,550 00
5,769 boats fished by 9,132 men.....	166,649 00
199,744 fathoms of gill net.....	118,408 00
97 trap and smelt bag-nets.....	14,680 00
3 weirs.....	60 00
478 seines of 28,277 fathoms.....	28,366 00
62 lobster canneries employing 1,332 hands.....	33,450 00
73,630 lobster traps, with trawl lines, &c.....	40,640 00
104 freezers and ice-houses.....	8,060 00
805 smoke and fish-houses.....	163,060 00
162 piers and wharfs (private)....	18,180 00
802 trawls.....	7,170 00
Total value.....	649,273 00

STATISTICS OF FISHERIES IN THE PROVINCE OF QUEBEC,

RETURN of the Number and Value of Fishing Boats and Nets, Number of Men
River St. Lawrence from Cape Chatte to

Number.	FISHING LOCALITIES.	FISHING BOATS.		Number of Fishermen.	KINDS OF NETS USED.					
		No.	Value.		Gill nets.			Eel and Brush Fisheries.		
					No.	Fathoms.	Value.	No.	Value.	
			\$				\$		\$	
1	Capucins	14	210	25	9	180	135			
2	Mechins	40	600	76	49	1125	900			
3	Grosses Roches.....	11	165	22	13	260	195			
4	Ste. Félicité.....	36	540	61	32	650	495	6	120	
5	Matane.....	9	135	18	14	360	305	12	240	
6	Rivière Blanche.....	14	210	28	17	340	255	1	20	
7	Sandy Bay.....			15	10	80	24	5	100	
8	Metis.....			7				7	140	
9	Ste. Flavie.....			8				8	160	
10	Ste. Luce.....			17	1	75	15	16	320	
11	Ste. Anne.....			11				11	220	
12	Rimouski.....			10				10	200	
13	Sacré-Cœur.....			10				10	200	
14	Bic.....			10				10	200	
15	St. Fabien.....			4				4	80	
16	St. Simon.....			4	4	75	15			
17	Inland waters of Co. Rimouski.....									
18	do Témiscouata.....									
19	Notre Dame des Sept Douleurs.....	12	1700	40				20	2000	
20	Isle aux Pommès.....	1	100	2				1	75	
21	Trois Pistoles.....	2	200	10				6	550	
22	Isle Verte.....	9	1100	28				17	1075	
23	Cacouna.....			12				12	1000	
24	River du Loup.....	1	150	8	3	60	120	7	550	
25	St. André.....			23				38	1670	
26	Kamouraska.....			4				11	707	
27	St. Denis.....			11	11	1285	514	11	400	
28	Rivière Ouelle.....			42	42	4020	1608	43	1940	
29	Ste. Anne de la Pocatière.....			23	1	85	34	22	580	
30	Inland waters, Co. L'Islet.....									
31	St. Roch.....			40				40	3150	
32	St. Jean.....			50				50	3860	
33	L'Islet.....			42				51	4080	
34	Cap St. Ignace.....			16				16	1100	
35	Ile aux Grues.....			24				24	2400	
36	St. Thomas.....	1	12	21				21	1760	
37	Berthier.....	4	40	20				21	2550	
38	St. Valier.....	6	170	2				2	4000	
39	St. Michel.....	5	55	5				5	2800	
40	Beaumont.....	9	240	4				4	2700	
41	Point Lévis.....	11	400	11				6	3050	
Totals.....		185	6027	764	206	8595	4615	528	43997	

* In the whole Matane district there was 1,364 brls. of codfish, valued at \$6,138, and 7,500 lbs. halibut. \$750; total, \$6,888.

EXCLUSIVE OF THE GULF OF ST. LAWRENCE.

together with the Yield, Value and Kinds of Fish, &c., on the south shore of the Point Lévis, during the year 1893.

KINDS OF FISH.										Coarse and small fish, brls.	Fish for manure, barrels.	VALUE.		Number.
Salmon, lbs.	Trout, lbs.	Shad, lbs.	Herring, barrels.	Eels, lbs.	Sturgeon, lbs.	Sardines, barrels.	Whitefish, lbs.	Pickarel, lbs.				\$	cts.	
			100									*6,888	00	
8830			470									450	00	1
			175									3,881	00	2
375	200		550							50		787	50	3
6570	3000		890			600				300		2,595	00	4
			300									7,569	00	5
375			160			60				100		1,350	00	6
2625			280			1240						1,025	00	7
150			150			40						5,505	00	8
4500			500			800				25		837	50	9
3675			90			400				100		5,600	00	10
1015			100	800		315				50		2,365	00	11
1500			100			200						1,646	00	12
1600			100			250						1,350	00	13
500			100	1400		100						1,520	00	14
750												934	00	15
200	12500											150	00	16
	11500											1,290	00	17
460		5500	355		200	260				200	25	1,150	00	18
30			4							20		3,424	00	19
300		50	60		200	50				300	60	84	00	20
312		50	44	600	1250	20				100	40	1,425	00	21
1980		1000	100	300	400	100				60	40	754	40	22
900		120	200	150	400					50	10	1,448	00	23
30			11	5750	860	74				5	12	1,275	20	24
300		3500		1755	4600	148					20	695	10	25
4500		4300		9860	120	14						1,109	30	26
		2500		39700	200	34						+1,798	40	27
		650		16425	25960						15	4,957	50	28
	7000										120	2,642	10	29
				20225								700	00	30
				50300						125	125	1,651	00	31
				39005						135	135	3,490	50	32
				4800	8150		1800	1000		128	128	2,788	30	33
				87400						29		1,058	00	34
		800		15800	4400		7854	1000		28		5,328	00	35
		3680		25430	2100		12200	1100		37		2,049	32	36
290		8400		24000	3260		32400	2450		17		3,012	60	37
1630		6750		20200	2800		5148	520		21		5,230	50	38
619		14400		7600	3000		10700	1000		19		2,409	64	39
1110		6950		18400	1800		8000	1270		25		2,685	00	40
1120												2,631	50	41
46246	34200	58650	4839	389900	59700	4705	78102	8340	1317	1355		99,540	36	

† In the amount of No. 28 the value of white whales (marsouins) are included.

RETURN of the Number and Value of Fishing Boats and Nets, Numbers of Men,
River St. Lawrence, from Quebec

Number.	NAME OF FISHING LOCALITIES.	FISHING BOATS.		Number of Fishermen.	KINDS OF NETS USED.					
		Number.	Fathoms.		Gill Nets.			Brush and Eel Fisheries.		
					Number.	Fathoms.	Value.	Number.	Value.	
	<i>Island of Orleans.</i>		§				§		§	
1	St. Laurent			6	6	2100	1520			
2	St. Jean			9	6	920	635	3	400	
3	St. François (south side)			16				16	1292	
4	Argentenay			9				9	510	
5	St. François (north side)			6				6	200	
6	Ste. Famille			12	2	520	600	10	380	
7	St. Pierre			6	6	1320	1200			
8	Ste. Petronille			1	1	220	200			
	<i>North Coast.</i>									
9	Château Richer			4	1	250	200	3	62	
10	Ste. Anne			5				5	120	
11	St. Joachim			23				23	2156	
12	Isles Madame and aux Reaux			3				3	300	
13	St. Siméon			7	1	80	17	6	60	
14	Ste. Fidèle			8	1	70	15	7	70	
15	Malbaie			19	1	90	16	18	120	
16	Bay St. Paul and neighbouring lakes in County of Charlevoix			13				13	80	
17	Ile aux Coudres			30				50	250	
18	Les Eboulements			25				35	230	
19	St. Irénée			16				16	130	
	<i>Saguenay Division.</i>									
20	Inland waters									
21	St. Firmin	6	90	6				6	120	
22	Tadoussac	3	165	6	3	430	430	1	25	
23	Bergeronnes	3	60	3	3	350	350			
24	Bon Désir	1	20	2	1	50	50	1	20	
25	Escoumains	8	120	8	4	400	400	4	80	
26	Sault au Mouton	3	45	5				5	100	
27	Mille Vaches	8	75	8	1	60	60	7	140	
28	Portneuf	4	60	4	3	150	150	1	20	
29	Sault au Cauchon	1	20	1	1	100	100			
30	Islet Jérémie	3	60	3	3	150	150	1	20	
31	Bersimis	1	20	1	1	75	75	1	20	
32	Lake St. John Division†			150						
	Totals	41	735	165	45	7335	6168	250	6905	

† Estimated.

together with the Yield, Value and Kinds of Fish, &c., on the north shore of the to Bersimis, during the year 1893.

KINDS OF FISH.												VALUE.		Number.
Salmon, lbs.	Trout, lbs.	Shad, lbs.	Herring, brls.	Eels, lbs.	Sturgeon, lbs.	Sardines, brls.	Whitefish, lbs.	Pickrel, lbs.	Coarse and Small Fish, brls.	Fish for Manure, brls.	White Whales, No.	Oil, galls.	\$ cts.	
1144		7000		25200			4560	1464					2,598 80	1
1016		5500		34800			6600	1740					3,236 20	2
				27100									1,626 00	3
				14700									882 00	4
				2800	400		2328	744	33				514 44	5
64		500		13400	3200		9360	2760	76				2,153 60	6
256		1150		24600	200		7920	2520					2,367 80	7
16		100		4000			600	180					306 20	8
16		80		4700	3000		5520	1620	38				1,106 60	9
				3300			960	360					292 80	10
				35000									2,100 00	11
				12000									720 00	12
150	600		2						2	10			110 00	13
100	300		1						2	4			62 50	14
150	700		4						4	100			180 00	15
	40000			13000									4,780 00	16
				8000					5				495 00	17
				2000									120 00	18
									10	1			30 50	19
	25000												2,500 00	20
1200			20			5				200	45	2250	1,525 00	21
15160	5000		10							250	15	750	4,062 00	22
11300	2000										55	2750	3,780 00	23
1500			5							50			347 50	24
13680			25			10				600	40	2000	4,138 50	25
1000			45			10				250			557 50	26
5000			80			25				500			1,685 00	27
10500	1000		5			2				40			2,248 50	28
2440													488 00	29
3200			3			1				15			664 00	30
3800			3			2				25			792 00	31
	10000						20000	50000	400				‡13,000 00	32
71692	84600	14330	203	224600	6800	55	57848	61388	470	2045	155	7750	59,470 44	

‡ Add 100,000 Winninish, 20,000 pike.

RETURN of Fishing Stations, Number and Value of Fishing Boats and Nets, Number
extending from Quebec to Upper

Number.	FISHING DIVISIONS.	FISHING BOATS.		Number of Fishermen.	KINDS OF NETS USED.							
					Gill Nets.			Seines.		Eel Fisheries.		
		No.	Value.		No.	Fathoms.	Value.	Fathoms.	Value.	No.	Value.	
			¢				¢		¢		¢	
1	Sherbrooke and Megantic.....			100								
2	Magog and Brome.....			30								
3	Missisquoi Bay.....	12	144	36				1000	500			
4	Richelieu River.....	75	950	102				3500	600	8	17000	
5	Châteauguay.....	50	900	100				200	200			
6	Beauharnois.....	50	750	102	26	298	312	450	360			
7	Laprairie, including Montreal and vicinity.....	20	200	29	1	20	2	800	400			
8	Verchères County.....			164	1	30	20	620	550			
9	Richelieu County and St. Francis River.....	35	200	40				240	285			
10	Yamaska County and River.....	67	306	114				510	350	8	150	
11	Nicolet.....	38	200	47	7	114	11	520	300	38	65	
12	Three Rivers.....	5	30	10				240	50	3	10	
13	Berthier, Maskinongé and Montcalm.....	50	740	70	11	165	165	200	125			
14	Terrebonne.....	45	270	90	9	135	20	190	190	9	50	
15	Lake of Two Mountains and Isle Perrot.....	14	125	26	50	700	150			15	20	
16	River Beaudet.....			8	1	20	10	110	75			
17	Lower Ottawa.....	14	224	15	50	540	345					
18	Upper Ottawa.....	34	338	34	150	1500	800					
19	Gatineau Lakes.....											
	Totals.....	509	5371	1117	306	3522	1835	8580	4015	81	17295	

of Men, together with the Yield, Value and Kinds of Fish, &c., within the District **Ottawa**, during the Year 1893.

KINDS OF FISH.										TOTAL VALUE.	Number.
Trout, lbs.	Shad, lbs.	Eels, lbs.	Sturgeon, lbs.	Whitefish, lbs.	Maskinongé, lbs.	Bass, lbs.	Pickereel, lbs.	Pike, lbs.	Coarse and small fish, lbs.		
36400	10950	12700	8500	4600	20000	13500	43450	27400	31500	\$ 12,434 50	1
36000	500	1000				15500	5500	1000	94000	7,765 00	2
	6250						29440		35200	2,903 00	3
		43400	8800	500	500	500	2150	6000	152360	8,210 30	4
		13000	35000		2000	35000	20000	15000	100000	9,850 00	5
		37000	25900		3500	4800	9800	17200	110000	8,922 00	6
	200	10000	8000		6000	8000	7000	10000	35000	3,832 00	7
	700	14700	1600		200	870	3400	3500	14000	1,849 20	8
		10000	550		150	350	2500	750	15500	1,290 50	9
		4300	7750		4800	1745	6110	10600	185850	7,526 70	10
	10900	16000	5600	450	1000	1200	1400	1600	200000	*5,868 00	11
15000	830	800		900			700	1000	1000	3,284 80	12
50000	200	2400	1500	2000	500	750	2100	3350	177000	11,063 50	13
35000	100	1500	800		900	2300	4300	3900	2300	4,315 00	14
		2000	5200		5100	3000	8600	10200	30700	2,779 00	15
		30000	10000		700	800	500	700	30000	3,450 00	16
1000	6000	2400	20000	2200	2600	800	6500	14250	48000	4,661 50	17
		2230	2750	160	4550	4160	8800	14030	68250	4,023 20	18
90600				8600		11250	8500	45250		13,110 50	19
264000	36630	203430	141950	19410	52500	104525	170750	185730	1250660	117,138 70	

* 2,500 bushels of tom-cod valued at \$1,500 included in No. 11.

COMPARATIVE RECAPITULATION

Of the Quantity and Value of the different Fisheries from **Cape Chatte** to **Point Lévis**, in 1892 and 1893.

Kinds of Fish.	Prices for 1893.	1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
	\$ cts.		\$ cts.		\$ cts.
Salmon.....	Lbs. 0 20	32,774	6,554 80	46,246	9,249 20
Trout.....	" 0 10	32,800	3,280 00	34,200	3,420 00
Shad.....	" 0 06	78,854	4,731 24	58,650	3,519 00
Herring.....	Brls. 4 50	12,332	55,494 00	4,839	21,775 50
Eels.....	Lbs. 0 06	461,330	27,679 80	389,900	23,394 00
Sturgeon.....	" 0 06	64,420	3,865 20	59,700	3,582 00
Sardines.....	Brls. 3 00	4,150	12,450 00	4,705	14,115 00
Whitefish.....	Lbs. 0 08	78,102	6,248 16	78,102	6,248 16
Pickarel.....	" 0 05	8,340	417 00	8,340	417 00
Cod.....	Brls.	328	1,312 00	1,364	6,138 00
Halibut.....	Lbs. 0 10	10,000	1,000 00	7,500	750 00
Coarse and mixed.....	Brls. 3 00	8,642	25,926 00	1,317	3,951 00
Porpoise skins (marsouins).....	No. 4 00	120	480 00	96	384 00
do oils.....	Galls. 0 40	12,000	4,800 00	4,800	1,920 00
Fish for manure.....	Brls. 0 50	2,785	1,393 50	1,355	677 50
Total value of the fisheries.....			155,631 70		99,540 36
Decrease.....					56,091 34

COMPARATIVE RECAPITULATION

Of the Quantity and Value of the different Fisheries from **Quebec** to **Bersimis**, in 1892 and 1893.

Kinds of Fish.	Prices for 1893.	1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
	\$ cts.		\$ cts.		\$ cts.
Salmon.....	Lbs. 0 20	52,780	10,556 00	71,692	14,338 40
Trout.....	" 0 10	84,700	8,470 00	84,600	8,460 00
Shad.....	" 0 06	16,170	970 20	14,330	859 80
Herring.....	Brls. 4 50	104	468 00	203	913 50
Eels.....	Lbs. 0 06	149,050	8,943 00	224,600	13,476 00
Sturgeon.....	" 0 06	6,600	396 00	6,800	408 00
Sardines.....	Brls. 3 00	172	516 00	55	165 00
Whitefish.....	Lbs. 0 08	49,300	3,944 00	57,848	4,627 84
Pickarel.....	" 0 05	53,360	2,668 00	61,388	3,069 40
Pike.....		20,000	1,000 00	20,000	1,000 00
Winninish.....		100,000	6,000 00	100,000	6,000 00
Coarse and mixed fish.....	Brls. 3 00	551	1,653 00	470	1,410 00
Porpoise skins (marsouins).....	No. 4 00	142	568 00	155	620 00
do oils.....	Galls. 0 40	7,100	2,840 00	7,750	3,100 00
Fish for manure.....	Brls. 0 50	2,211	1,105 50	2,045	1,022 50
Total value of the fisheries.....			50,097 70		59,470 44
Increase.....					9,372 74

COMPARATIVE RECAPITULATION

OF the Quantity and Value of the different Fisheries, from Quebec to Upper Ottawa, in 1892 and 1893.

Kinds of Fish.	Prices.	1892.		1893.	
		Quantity.	Value.	Quantity.	Value.
	\$ cts.		\$ cts.		\$ cts.
Trout..... Lbs.	0 10	277,950	27,795 00	264,000	26,400 00
Shad..... "	0 06	24,350	1,461 00	36,630	2,197 80
Eels..... "	0 06	204,925	12,295 50	203,430	12,205 80
Sturgeon..... "	0 06	142,320	8,539 20	141,950	8,517 00
Whitefish..... "	0 08	15,860	1,268 80	19,410	1,552 80
Maskinongé..... "	0 06	52,450	3,147 00	52,500	3,150 00
Bass..... "	0 06	97,130	5,827 80	104,525	6,271 50
Pickarel..... "	0 05	139,475	6,973 75	170,750	8,537 50
Pike..... "	0 05	193,645	9,682 25	185,730	9,286 50
Coarse and small fish..... "	0 03	1,018,600	30,558 00	1,250,660	37,519 80
Tom-cods..... Bush.	0 60	15,000	7,500 00	2,500	1,500 00
Total value of the fisheries.....			115,048 30		117,138 70
Increase.....					2,090 40

RECAPITULATION.

YIELD and Value of the Fisheries of the Province of Quebec (*exclusive of the Gulf Division*) for 1893.

Kinds of Fish.	Quantity.	Value.
		\$ cts.
Salmon..... Lbs.	117,938	23,587 60
Trout..... "	382,800	38,280 00
Shad..... "	109,610	6,576 60
Herring..... Brls.	5,042	22,689 00
Eels..... Lbs.	817,930	49,075 80
Sturgeon..... "	208,450	12,507 00
Sardines..... Brls.	4,760	14,280 00
Whitefish..... Lbs.	155,360	12,428 80
Maskinongé..... "	52,500	3,150 00
Bass..... "	104,525	6,271 50
Pickarel..... "	240,478	12,023 90
Pike..... "	205,730	10,286 50
Winninish..... "	100,000	6,000 00
Cod..... Brls.	1,364	6,138 00
Halibut..... Lbs.	7,500	750 00
Tom-cod..... Bush.	2,500	1,500 00
Coarse and mixed fish..... Lbs.	1,608,060	42,880 80
Porpoise skins..... No.	251	1,004 00
do oil..... Gall.	12,550	5,020 00
Fish for manure..... Brls.	3,400	1,700 00
Total in 1893.....		276,149 50
do 1892.....		320,777 70
Decrease.....		44,628 20

RECAPITULATION.

YIELD and Value of Fisheries in the whole Province of Quebec, for 1893.

Kinds of Fish.	Quantity.	Value.	
		8	cts.
Salmon, salted.....	Brls. 741	11,856	00
do fresh.....	Lbs. 611,518	122,303	60
do in cans.....	" 16,500	2,475	00
Herring, salted.....	Brls. 29,051	130,729	50
do fresh.....	Lbs. 90,400	904	00
do smoked.....	" 41,400	828	00
Mackerel, salted.....	Brls. 8,215	115,010	00
do fresh.....	Lbs. 7,100	852	00
Lobsters, canned.....	" 1,197,134	167,598	76
do fresh.....	Ton- 2	80	00
Cod, salted.....	Cwt. 244,894	1,102,023	00
do fresh.....	Brls. 1,364	6,138	00
do tongues and sounds.....	" 253	2,530	00
Hake, salted.....	Cwt. 150	450	00
Haddock, salted.....	" 2,922	10,227	00
Trout.....	Lbs. 407,070	40,707	00
Shad.....	" 109,610	6,576	60
Halibut.....	" 161,115	16,111	50
Smelts.....	" 231,514	11,576	20
Clams.....	Brls. 1,408	7,040	00
Eels.....	Lbs. 844,530	50,405	80
Sturgeon.....	" 208,450	12,507	00
Sardines.....	Brls. 4,760	14,280	00
Whitefish.....	Lbs. 155,360	12,428	80
Maskinongé.....	" 52,500	3,150	00
Bass.....	" 104,525	6,271	50
Pickarel.....	" 240,478	12,023	90
Pike.....	" 205,730	10,286	50
Winninish.....	" 100,000	6,000	00
Tom cods or frost fish.....	" 173,163	5,158	15
Coarse and mixed fish.....	" 1,608,060	42,880	80
Seal skins.....	No. 21,038	26,297	50
Porpoise skins.....	" 251	1,004	00
Fish oil.....	Galls. 252,029	100,811	60
do for bait.....	Brls. 74,472	111,708	00
do for manure.....	" 95,351	47,675	50
Total for 1893.....		2,218,905	21
do 1892.....		2,236,732	06
Decrease.....		17,826	85

STATEMENT

OF the Number and Value of Boats, Nets and other Fishing Material used in the Inland Waters of **Quebec** (exclusive of the Gulf Division).

Articles.	Value.
	\$ cts.
735 fishing boats	12,133 00
19,452 fathoms of gill-nets.....	12,618 00
8,580 fathoms of seines.....	4,015 00
859 brush of eel weirs	68,197 00
Total.....	96,963 00

NOTE—The number of fishermen is given at 2,046, but most of them only fish during a short period of the year.

STATEMENT

OF the Vessels and Boats and other Fishing Material employed in the whole **Province of Quebec**, for 1893.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
59 vessels of 2,093 tons.....	50,550 00	
6,504 fishing boats.....	178,782 00	
219,226 fathoms of nets.....	131,026 00	
36,857 fathoms of seines.....	32,381 00	
862 weirs.....	68,257 00	
97 trap and small bag-nets.....	14,680 00	475,676 00
62 lobster canneries.....	33,450 00	
73,630 lobster traps with lines, &c.....	40,640 00	74,090 00
802 traws.....	7,170 00	
104 freezers and ice houses.....	8,060 00	
805 smoke and fish houses.....	163,060 00	
162 piers and wharfs (private).....	18,180 00	196,470 00
Total.....		746,236 00

APPENDIX No. 9.

MANITOBA.

ANNUAL REPORT FOR THE YEAR 1893, ON THE FISHERIES OF
MANITOBA, BY INSPECTOR R. LATOUCHE TUPPER.

SELKIRK, MAN., 31st December, 1893.

Hon. Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my first annual report on the fisheries of Manitoba, and with it the statistics of the catch for the year past, the value of boats, nets, &c., and remarks on the general state of the industry in the province.

The fishing industry is fast assuming large proportions, and as communication becomes easier with different waters and transportation becomes cheaper, the fishing will increase with rapid strides, and new fishing grounds will be brought into use.

Lake Winnipeg, though, will always remain the great source of supply for the far-famed Manitoba whitefish, and the utmost care must be exercised to prevent its depletion, and by artificial production maintain its productiveness and consequent source of revenue and employment to the people. The wise precautions taken by the department in closing the mouths of rivers up which the whitefish go to spawn, and the confining the commercial fishermen to waters away from any shore spawning beds is having a very beneficial effect on the supply and will largely provide for the heavy draught now yearly being made on the lake. The planting of fry from the hatchery now in operation at Selkirk cannot but have a marked effect also in a few years, and the utmost satisfaction is expressed by the public and by the fishermen at its erection.

Only going back three years, I find that in 1889 there were engaged in commercial fishing:

1889.	1893.
Men, 63	Men, 136.
Steam vessels, 3.....	Steam vessels, 13.
Sail boats, 25.....	Sail boats, 30.
Gill-nets, 32,000 fathoms.....	Gill-nets, 67,350 fathoms.
Value, \$47,900.00	Value, \$109,800.00
The catch in the year, 1889, was by the commercial fishermen.....	1,924,224 lbs.
In 1893.....	3,873,281 lbs.

The change of the close season from the 15th December to the first day of the same month is a great boon to the small fishermen who ply their vocation principally in winter, fishing through the ice. There is no doubt that whitefish have spawned by the end of November, and the ice gets too thick by the middle of December as a

rule for the fishermen to cut holes for their nets and especially where they have to move, often to locate or follow the fish. I would respectfully recommend that the 15 days taken off December be added to the commencement of the close season, and that it commence the 20th or 25th at the latest of September. This to apply not only to Lake Winnipeg, but also to the other lakes of the Lake Winnipeg basin, such as Lakes Manitoba, Winnipegosis, Dauphin, &c. While on the subject of close seasons, I would earnestly draw your attention to the reports of officers Develin, of Lake Manitoba, and Thompson, of Lake Winnipeg, regarding the spring close season for the spring spawning of fishes.

The ice does not leave the lakes until the end of May or beginning of June, though the streams up which the fish run are open earlier. Many fish do not enter the streams to spawn, preferring the gravelly or coarse sand shore of the lakes, especially the larger spring spawners of the most valuable kinds. I do not think one pickerel out of ten enter rivers to spawn. Suckers and pike frequent the rivers almost entirely, yet many a pair of large pike will be found in the bays of the lake, especially where there are rush beds. I think the guardians' recommendations are correct, and I am glad to see they are urged to make the report by the fishermen themselves. Some fishermen in Mr. Martineau's district seem to want no close season for pike. I cannot agree with them. The statistics of the province shows that they are a valuable fish and of good commercial value. True, I would rather see trout, black bass or some other fish in their stead, but this is impossible in the waters they frequent, and in nine cases out of ten in these waters it means pike or no fish. Again, if fishing for pike was allowed in spring the pickerel would be caught in great quantities also, as in many places they will be found together, and Manitoba pickerel is nearly as valuable a fish as the whitefish.

The fishing has in the past been done principally in the winter on Lake Manitoba, but now that a freezer has been built there there will be an inducement for summer fishing, as the fish can then be frozen and held for market—consequently if the close season remains as it is, in spring a great destruction of spawning fish may be looked for.

The fact that the crews of the fishing companies operating in the north end of Lake Winnipeg cannot go out to the fishing grounds until after the 1st of June prevents any destructive spring netting there, but in the southern part of the lake, as Guardian Thompson points out, the destruction is very great.

All fishing in Manitoba lakes is by gill-nets. No pound or trap-nets being used and only three seine licenses having been taken out the past year. These nets I will advert to further on.

Guardian Thompson of Gimli, who is a new officer, having taken the place of the late Guardian Wood, of Bad Throat River, who died last year, says:—

"I find that my predecessor has valued the fishing boats at too low a figure. This I have corrected, though I doubt if even my valuation is high enough; this will account for the difference in valuation of last year. On accompanying returns you will also doubtless find that I present a greater number of fish caught than my predecessor did in his last report. This is to be accounted for by the fact that fishing has been very good this season all along the settlement, and not because of any extra effort. The close season for pickerel should be changed, if depletion of this valuable fish is to be guarded against. I say it without hesitation and base in on the almost unanimous assertion of the fishermen, many of whom are keen observers. Pickerel do not commence to run to the shoals and deposit eggs until about the 20th of May and continue there until about the 20th of June. This is the time the fish require protection, but as it is this is the time it is caught in greatest numbers. As regards whitefish, I may say that fishermen assert they never deposit eggs after the 20th November, hence I believe ample protection would be given though the close season were shortened by fifteen days. It would not merely be more satisfactory, but would be a source of considerable gain to the settlers were they allowed to catch whitefish after December 1st."

(NOTE.—This officer had not heard when he wrote that the season had been changed as he recommended.)

In this district there were caught:—

	Value.
Whitefish.....	\$ 2,718 40
Pickarel.....	3,656 25
Pike	643 50
Tulibee.....	2,492 25
Catfish.....	152 25
Mixed fish.....	820 12½

And of this there was shipped out of this district for export:—

	Lbs.
Whitefish.....	55,000
Pickarel.....	90,000
Tulibee.....	80,000

Guardian Johnston of Fisher River does not send a full or long report from his district. He writes:—"Your recent appointment to the position of Inspector will, I presume, exempt you from sending an annual report to the department." By good fortune I was able to get a letter out to him in time to get the necessary statistics from him. I am sorry to say this officer has—although he has pluckily made the necessary inspection of his district, lost the use of one arm almost entirely the past season, and I am afraid the department will lose a good officer on the lake.

Both he and the guardian at Gimli are silent regarding the observance of the fishery laws in their districts, but after Mr. Johnston's first inspection he reported the law as well observed. Mr. Johnston reports the catch in his district as follows:—

	Lbs.	Value.
Whitefish.....	210,600	\$6,318 00
Pickarel.....	93,850	1,877 00
Sturgeon	37,200	1,116 00
Pike.....	9,300	93 00
Mixed fish.....	163,400	1,634 00

Of the above there was sold to the trade:—

	Lbs.
Whitefish.....	85,000
Pickarel.....	91,000

the balance being for home consumption. This of course does not include the fishing or any part of the fishing of the commercial companies fishing in Mr. Johnston's district, which I have kept separate.

Mr. Adams, the overseer at Waterhen River, writes as follows: "I have the honour to transmit herewith my annual report as fishery overseer of the district comprising Waterhen River, the southern portion of Lake Winnipegosis, and Lake Dauphin."

"This is an out-of-the-way place and I don't know yet who is inspector of Manitoba, as I did not get any mail since over three months." As his letter was posted on the 11th of December and got to me a month later, if a report is not full enough or if any directions are to be sent to an officer in this sparsely populated portion of Canada, how prompt a reply may be expected can be seen by this.

Continuing—Mr. Adams says—"Owing to the severe weather and deep snow of last winter, I have to report a considerable decrease in the fishing operations of this district as they are carried on in the winter chiefly for trade. The close season was found well observed at the different stations visited, but fishermen complain of its being too long, and say whitefish don't spawn after the 1st of December."

Guardian Adams reports the catch as follows:—

	Lbs.	Value.
Whitefish.....	50,000	\$1,000 00
Pickarel.....	5,000	75 00
Pike	8,000	40 00

For home consumption there was used:—

	Lbs.	Value.
Whitefish.....	190,000	\$3,800 00
Pickarel.....	20,000	300 00
Pike.....	60,000	300 00
Mixed Fish.....	250,000	2,500 00

There are a great many Indians in this district whose great source of food winter and summer is fish, and of course the poorer the Indian the more dogs he has to feed.

Mr. Develin, the guardian at St. Laurent, in Lake Manitoba, says: "I visited during my tour of inspection Oak Point, Marshy Point, Swan Creek, Rabbit Point, Rocky Island Point and Long Point. To the South, Lake Francis, Rocky Island, Claudeboye Bay, Two Creeks, and Totogan, and found the fishery laws well respected, only in one instance I confiscated one whitefish net that was wet and drying on the beach at Swan Creek. I also found that the fishery regulations were well respected by those who were fishing for the freezer and also by Mr. Bradstock who is agent for Blackwood Bros.

"During my inspection, complaint was made by practical fishermen that the close season for pickerel and pike was wrong, as the time the close season is opened is exactly the time the pickerel and pike make their way into the creeks to spawn, and in their opinion the close season for pickerel and pike should be extended until the 1st of June."

It will thus be seen that Mr. Develin, who is himself a good officer and a close observer, reports exactly the same opinion as the guardian from Gimli on Lake Winnipeg.

Mr. Develin also reports the catch for the season as satisfactory, though he fears that if the close season for spring spawners is not changed, a large amount of early fishing may spring up, as the new freezer will make a market for the fish, which was not there before. Summer fishing heretofore has not been carried on to any great extent, as the fish could not be marketed. Mr. Develin also says in a former letter, I would suggest to you strongly that no license be issued to non-residents to fish in the lake, as it is not large enough, and the laws would be violated in every respect by men brought to fish in the district. The resident fishermen now see after a few years of hard schooling that the Government are working for their benefit.

The reason, I believe, for this request to keep out non-resident fishermen is a report that Blackwood & Co. were going to bring in fishermen to fill their freezer.

I drew the attention of Mr. Develin to clause 6 of the fishery regulations, and told him to inform the fishermen that as long as that clause stood their fears were groundless.

The catch in this district was:

	Lbs.	Value.
Whitefish	36,200	\$1,448 00
Pickarel	78,000	2,730 00
Pike	167,000	2,505 00
Tulibee.....	11,000	137 00

And there was used for home consumption:

Mixed fish	48,000	7,780 50
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Mr. Martineau, guardian at the Narrows of Lake Manitoba, reports as follows: "I have visited the fishing grounds under my supervision several times during the year 1893, and found them correct," and again he says: "I am glad to report that

the close seasons were strictly maintained, and every fisherman, and even the Indians did not violate the fishing regulations. "It is unfortunate that I had so many complaints against parties illegally fishing in his district, that I sent Mr. Sutherland to investigate these reports, and it was equally unfortunate that Mr. Sutherland was unfortunate enough to find none of the parties at home I told him to call on, so no investigation was held; but a fish dealer told me he had bought some thousands of whitefish caught by a neighbour of the guardian in the close season, and the fish were now safe in Buffalo. It may be that this breach of the law was committed when Mr. Martineau was absent in the east, where I believe he was for some time on leave.

Mr. Martineau says: "Fishing operations are chiefly carried on in winter, as summer fishing requires more outlay than the fishermen are generally prepared to make. The inhabitants fish for a living solely during the balance of the year. There is a general complaint by all fishermen that the close season for whitefish is too long, and they all agree that the close season, especially for them, should be, say from the 1st of October to the 15th or 20th of November, and also request that there be no close season for pike, as it is known that pike kill more whitefish than the fishermen do, and eat and destroy great quantities of spawn. Nevertheless," says Mr. Martineau, "fish of all kinds are reported as plentiful as ever all over the Lakes Manitoba, Ebb and Flow, and Dog Creek."

I should think if the fishermen in this district gave the subject a moment's thought they would know that owing to the construction of the pike's jaws he would starve to death if he tried to live on what eggs he could pick off the bottom of the lake, bad a character as he is this sin must not be laid at his door. Of course they eat large numbers of young whitefish before they get to the deep and cold water where the pike does not follow them very much, but all fishes are in the two classes—the chased and the chasers. The pickerel is as destructive almost as the pike and both are valuable fish. The pike is a useful fish in our waters, the great majority of fishermen would not like to see it exterminated, and many a Manitoban would go fish hungry if it was; besides, if open fishing was allowed for pike in the spring, just as many pickerel would be taken in a great many places.

As in other districts, only the gill-net was used. The catch was:—

		Value.
Whitefish, salted, 6½ brls.....	\$	45 50
Lbs.		
Whitefish.....	173,600	5,208 00
Pickerel.....	65,350	1,301 00
Pike.....	210,860	1,054 30
Tulibee.....	35,600	890 00
For home consumption:—		
Mixed fish.....	133,540	4,006 20

Most of the winter caught fish are sold to traders who go out sometimes over 100 miles buying from the settlers and Indians. These traders again sell to dealers in Selkirk, sometimes in Winnipeg, Portage la Prairie, Reaburn, &c. In purchasing from Indians some unprincipled pedlars take out trashy goods and get the fish for a song, in any case where there are two or three middlemen between the fisherman and the consumer, the former has the small end of the fish. Some of these traders are honest, reliable men, and have traded and purchased fish on the lakes for years. These men, I find, help the fishermen in getting their licenses and in most cases refuse to purchase only from a licensed person, be he Indian or white man. There are some unprincipled pedlars, principally coming from Winnipeg, who buy from unlicensed as well as the licensed. In order to prevent this and for the better collection of statistics, I would respectfully suggest that all traders in fish be licensed and registered, if possible. This I am certain will meet the approval of all respectable traders and indeed be a protection to them.

There were three seine licenses granted, all in the vicinity of Winnipeg. I caused the seizure of five nets on these seining grounds which will form the subject of a separate report.

The fish caught in these nets, as will be seen, are principally of the coarser kinds, such as catfish, sheepsheads, suckers and gold eyes, and they are decreasing in number, at least the better kinds as the river gets fouler by sewage. Catfish seem to thrive on the river better each year, and opposite the sewers in Winnipeg is their favourite place. These seiners sell their catch for local consumption and at a cheap rate, keeping the live fish in pens until needed and they give a cheap food supply to many poor people. I think a 3-inch mesh should be allowed these fishermen, otherwise they cannot make wages.

While I would be the last one to advocate the lessening of the mesh so as to catch immature fish in any quantity, I think for these gold eye and sucker fishermen—for those and catfish are the principal catch—and in view of the people to whom these fish are really a boon, the mesh of the seines could be reduced to 3 inches.

In conclusion, I would beg to say that the short time I have been Inspector, and the heaviest and most anxious time of the year in the hatchery where all the conditions are new and require careful and constant work night and day coming together, has prevented me making as full a report as I would wish to make. But no Inspector can make a, to himself at least, satisfactory report until he has visited every district in his province. I have, of course, been unable to do this the past year.

I beg herewith to append a statement of the number and value of vessels, boats and fishing materials, the number of men employed, &c., with the kinds and quantities of fish caught in Manitoba in the year 1893.

All of which is respectfully submitted.

I have the honour to be, sir,
Your obedient servant,

R. LATOUCHE TUPPER,
Inspector.

RETURN of the Number and Value of Vessels, Boats and Fishing Material, the Number of Men employed, &c., with the Kinds and Quantities of Fish in the Province of Manitoba, for the Year 1893.

VESSELS AND BOATS EMPLOYED.				FISHING MATERIALS.				KINDS OF FISH.										VALUE.		
Vessels or Tugs.				Boats.		Gill-nets.		Seines.												
Number.	Tonnage.	Value.	Men.	Number.	Value.	Pachoms.	Value.	Pachoms.	Value.	Whitefish, barrels.	Whitefish, lbs.	Pickerel or Dore, lbs.	Pike, lbs.	Tullibee, lbs.	Catfish, lbs.	Sturgeon, lbs.	Mixed fish, lbs.		Home Consumption, lbs.	
13 1513	92600	88	30	8700	136	44850	7500	666	3531585	185936	22150	7000	11000	60000	48000	190,070	83			
St. Laurent and Shoal Lake.			105	1000	120	15750	1575		30200	78000	167000					8,300	00			
The Narrows and Ebb and Flow Lake to Sandy Bay.			60	685	140	14350	1435	63	173600	65350	210800	35600		146300	133540	18,789	10			
Waterhen River and Lakes Dauphin, St. Martin and Winnipegosis.					90	6750	810		140000	25000	68000			250000	520000	16,810	00			
Lake St. Martin and Fairford River to Steep Rock.			80	800	87	5000	500		235000	30535	22300			326100		16,373	05			
Mouth of Red River to Loon Straits.			126	1264	171	17675	1767		67960	112500	64350				10150	166150	11,463	25		
Beren's and Fisher River to Bull Head.			33	330	115	14500	1400		210600	93850	9200			37200		163400	417750	20,457	00	
Red River.			5	76	6	50	20	90	800	9200	9200					6200	89200	1,364	00	
Totals.	13 1513	92600	88	439	12855	865	118925	15007	90	105 672½	4395755	600371	573000	53600	10150	37200	1118150	1363515		
Value										6725	219788	18011	11461	1608	101	1116	11182	13635	283,627	23

APPENDIX No. 10.

NORTH-WEST TERRITORIES.

ANNUAL REPORT FOR THE YEAR 1893, ON THE FISHERIES OF THE
NORTH-WEST TERRITORIES, BY INSPECTOR F. C. GILCHRIST.

FORT QU'APPELLE, ASSA., 31st December, 1893.

Hon. Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa,

SIR,—I have the honour to submit synopses of the annual reports for the past year of the overseers and guardians in my district. Up to the present I have received no reports from the more remote regions. In fact, throughout the vast country to the north of the North Saskatchewan River, from Cedar Lake on the east side to the Rockies on the west, a distance of 600 miles in length, a trackless wilderness, except for the trails leading from one lonely settlement to another, which is interspersed with hundreds of lakes that are stocked with valuable food fishes, the regulations were introduced and enforced for the first time this year. The population is native, either half-breed or Indian, and lives very largely, and in the majority of cases, almost wholly on fish throughout the year. Evidence gathered from the natives, missionaries, Hudson Bay Company and Indian Department officials, goes to prove that in every instance the waters, from which the natives have been in the habit of drawing their winter's supplies of fish in the fall, were rapidly failing in their fisheries; and in many cases the latter were things of the past, so far as the whitefish fisheries were concerned. All this was acknowledged; nevertheless, when your department sought to enforce tentatively the regulations, opposition, more or less strenuous, was met with all along the line, and it is within a very short time that some of those interested in the welfare of the people of the north have admitted that action of a protective nature was needed, if the food supply of the natives was to be preserved to them and their children.

That some hardships will have to be endured by the natives, if the regulations are enforced is true; but it is also true that if they are allowed to go on as they are doing whole settlements will be starved out, and be compelled to vacate their present locations, and go farther north or south, and in any case they will be thrown on the Government for support. The present custom of putting up their winter's supplies of fish in the breeding season, while it impoverishes the waters of their wealth, at the same time does not prevent what certain people say the enforcement of the regulations will result in, viz., hardships and suffering. Under the present system the natives put up in a short time in the fall what they consider ample supplies of fish; but unfortunately, they are as improvident as they are lazy, and in the course of a few weeks, what was considered plenty of fish to last till spring has entirely disappeared, and they have to fall back on the missionaries, Indian Department, or any one that will give to them food with which to keep themselves and their families alive. For they have no nets in the water at this time of the year, and the ice is so thick that the labour of putting in nets is very great, and they will not attempt it. Besides being indifferent fishermen, it is doubtful whether they would be able to catch enough fish at that time of the year with which to keep themselves alive. So badly pushed are they that they often resort to raffles in small streams at the approach of spring, for the purpose of catching suckers for food, as they run up stream preparatory to spawning. Towards the end of February and in March, they frequently suffer terribly from starvation, because of the improvident way in which they have managed the fish they put up the previous fall. Were they accustomed to growing a quantity of potatoes, to putting up a supply of smoked or dried fish in

the late summer to do them over the close season, and to putting in their nets under the ice after the close season, and fishing all winter, or until the weather became too cold and the fish inactive and hard to take, when they might take out the nets but not the lines; and towards the end of February and in March when the weather moderated, and the fish began to "move" they could attach the nets to the lines, and run them under the ice again and catch plenty of fish—for large hauls of whitefish are usually made in March and April—the annual starving would not take place, the fisheries would not become depleted, and the natives would not be in their present state of lazy, improvident helplessness. Unfortunately, these poor people have got into a bad way of doing things, and your officers have a heavy contract on hand to so enforce the regulations to preserve the fisheries, and teach the people to help themselves. The returns are incomplete for the reason that in Assiniboia, outside of the few lakes, and in Southern Alberta, the fishing is confined to streams and is done by hook and line; and as yet no attempt has been made to collect the statistics there. In northern Alberta and Saskatchewan the fisheries service is little more than introduced, the country is vast, the roads execrable, and the people widely scattered, ignorant, and averse to giving information regarding the fisheries. The fact that the people communicate with each other almost solely in Cree makes it more difficult for your officers to find out much pertaining to fisheries statistics. It is only by taking the number of the population of human beings and train dogs, and bearing in mind the fall catch where it is possible to get it, estimating from the proportion of fish in the daily food ration, which varies somewhat in the different settlements that we are enabled to get at an approximate estimate of the amount of fish caught and consumed. But this mode of estimating the catch does not enable us to get at the number of boats and the amount of netting used; nor does it enable us to subdivide the totals into the different varieties of fish. Still, with the great advance made in the enforcement of the regulations in the north during the past season, I expect to be able to show to you, at the close of 1894, as great an improvement in the collection of reliable fisheries statistics.

The report would have been more complete had I been in a position to await the arrival of several reports that have not yet come to hand; but instructions from the department to forward report at once has prevented my doing so.

Following this in a few days will be a report of observations on the spawning of whitefish on Long Lake, Assa., which as I have not yet finished the examination of a number of fish that arrived a few days since, I have found it impossible to complete in time to go forward with this report.

SYNOPSIS OF OVERSEERS' AND GUARDIANS' REPORTS.

Acting Overseer R. S. Cook, who resides at Prince Albert, reports that the fishery regulations on the whole have been well observed, and the numerous lakes of the Prince Albert District have had a rest such as they have not known before.

The regulations met with, and are still meeting with a great deal of opposition. The majority of the Indians with whom he has come in contact, admit that the regulations are wise and good, and that the fish are rapidly declining under the old system of fall fishing; but it has been represented to these poor uneducated people, by traders and unprincipled half-breeds, who make a living chiefly by trading with the Indians, that the regulations are infringing on the treaty rights of the Indians; and he would suggest that the Indian Department be asked to have this wrong impression removed. He and the two guardians under him have endeavoured to show the Indians and half-breeds who live chiefly on fish, that the regulations are not intended as a hardship, and that the sole object the Government has in enforcing these laws is the future welfare of the poor people; and the concessions made by the department this year have done more towards convincing them that such is the case than anything else that could have been done.

Overseer Cook has also been careful to impress upon them the necessity for making provision for the period covered by the close season next year. The fishery question is one of vital importance to the large native population of the north, and great care will always have to be exercised in the enforcement of the regulations, else dire results may follow.

Fishing in the north and south Saskatchewan Rivers was much better than last year. The estimated catch was as follows, viz.:

North Branch—		Lbs.
Gold-eyes 2,000.....		500
Pike and pickerel, 400.		1,600
Sturgeon, 850.....		17,000
South Branch, including Main River east to La Corne—		
Pike and pickerel, 700.....		2,800
Gold-eyes, 5,000.....		1,250
Sturgeon, 2,300.....		46,000
Fishing lakes south of Saskatchewan—		
Pike and pickerel, 3,500.....		10,000
Suckers, 1,500.....		1,500
Lakes north of North Saskatchewan—		
Whitefish, 164,000.....		492,000
Pike and pickerel, 20,000.....		70,000
Suckers, 10,000.....		10,000
Total weight of fish.....		<u>652,650</u>

The catch at Stanley Mission, Isle La Crosse, and Cumberland Districts is not included in the above.

Forty-five free permits have been issued to destitute half-breeds; 10 free licenses to Indian bands; 14 domestic licenses; and 12 applications are now before the department. Total revenue, \$52.

BATTLEFORD DISTRICT.

Special Guardian C. A. Smith, who lives at Jackfish Lakes, was put in charge of Turtle and Jackfish Lakes the beginning of October last, and reports that Turtle Lake lies over 70 miles north-west of Battleford, and is over 20 miles long, and in some parts over six miles wide. Turtle Creek drains the lake into the Saskatchewan. The Turtle Lake whitefish are the largest in the district, and the finest in quality. The lake is also well stocked with pike and suckers, but no tullibee or lake trout. Jackfish Lake, about 20 miles north of Battleford, is nine miles long, and in one place six miles wide. It contains the same kinds of fish as Turtle Lake, and tullibee in addition. The whitefish are not so large, nor so good as the Turtle Lake whitefish.

Long Lake lies east of Jackfish Lake, and contains the same kinds of fish, but has no tullibee. It is three miles long and three-fourths of a mile wide. This officer believes that the fish are being exterminated. There was a considerable decrease in the catch this year, which was largely owing to the presence of a fishery officer; but still the fisheries are not what they used to be. Five domestic licenses were taken out in this district; and one person was convicted of illegal fishing. The returns are:

	Lbs.	Value.
Whitefish.....	80,000	\$1,400

LAC LA BICHE DISTRICT.

The Indians and half-breeds in this district, viz., at Lac La Biche, Beaver, Whitefish, Goodfish, Saddle, and other lakes, fished as usual during the close season; but as I have received no reports from the officers there, I am unable to give the returns of the catch, but believe it to be somewhat less than last year.

EDMONTON DISTRICT.

Special Guardian George Purches, sergeant North-west Mounted Police at St. Albert, and *Special Guardian W. Smith*, constable North-west Mounted Police at Lac Ste. Anne, have been looking after the fisheries of this district. The Indians at White Whale Lake were allowed to fish during the close season with a limited amount of net to each family for their own use. *Guardian Smith* reports the regulations as having been faithfully observed at Lac Ste. Anne. He also reports that having been given to understand that no whitefish could be taken in the winter at Lac Ste. Anne, he watched two nets operated under the ice after the 15th December, and found the catch to vary from 29 to as low as 10 fish (the nets being examined each alternate day), and up to the present (the 28th December) fish are being taken in quantities sufficient to support the people. No licenses were taken out in this district. The catch was about the same as last year at White Whale Lake, but less at Lac Ste. Anne, viz. :—

	Lbs.	Value.
White Whale Lake—Whitefish.....	110,000	\$6,050
Lac Ste. Anne—Whitefish.....	40,000	2,200
Totals	<u>150,000</u>	<u>\$8,250</u>

PIGEON LAKE DISTRICT.

Special Guardian Donald Whitford, who resides near Hollbroke, Alta., reports no infractions of the regulations. In April last he destroyed 21 gill-nets, which he had confiscated in the previous December from half-breeds for illegal fishing. A number of Indians were allowed to fish during the close season for their own use, with a limited amount of netting per family. Four domestic licenses were taken out by whites and half-breeds, and one by an Indian. The catch of fish was less than in 1892, owing to the enforcement of the regulations, and was as follows :—

	Lbs.	Value.
By Indians—Whitefish.....	30,000	\$1,650
By Whites and Half-breeds.....	50,000	2,750
Totals.....	<u>80,000</u>	<u>\$4,400</u>

EAGLE QUILL LAKE.

Special Guardian W. G. Knight, who lives at Swift Current, Assa., reports the regulations as having been well observed. Only two licensed fishermen operated during the past season, their catch aggregating 3,000 pounds whitefish, value \$150.

LONG LAKE DISTRICT.

Overseer John Foster, of Silton, Assa., reports that at the opening of the fishing season on the 1st of January, the whitefish had all finished spawning, and the close season as now arranged seems to exactly suit this lake. [Note by the inspector. For reasons explained in the annual report for 1892, and as empowered by the Fisheries Act, I refused to grant licenses for this lake till the 1st January. The same course was taken again this season. The report which accompanies this on the spawning of the whitefish in Long Lake, fully explains the reasons for refusing to grant licenses till 1st January.] The catch of whitefish throughout January till the 14th February was very good. It then fell off for two weeks, but during March and till the 15th April, the catch was very good, and during the open season continued good till the hot weather, when very little fishing is done, the distance from market being too great. During September and the first four days in October, a great number of

whitefish were taken, and for a few days before the close season commenced all who were fishing in different sections for ten miles along the lake had a remarkable catch. Overseer Foster states that he is pleased to be able to state that Long Lake is well stocked with whitefish.

The amount taken by white men and half-breeds during the season was as follows:—

	Lbs.	Value.
Whitefish.....	32,000	\$1,600 00
Pike.....	14,000	280 00
Pickarel.....	6,000	180 00
Mixed fish.....	10,000	100 00
Totals.....	62,000	\$2,160 00

Indian catch as follows:—

	Lbs.	Value.
Whitefish.....	15,000	\$ 750 00
Pike.....	12,000	240 00
Pickarel.....	3,000	90 00
Mixed fish.....	15,000	150 00
Totals.....	45,000	\$1,230 00

There were fourteen whites and half-breeds engaged in fishing, and eleven Indians, all licensed; with 126 nets, valued at \$500.00.

During the year two draw lines, four nets, and one boat were confiscated for infraction of the regulations.

QU'APPELLE DISTRICT.

Special Guardian John Teader, jr., who lives on the north side of Wyosung Lake, reports that Wyosung and Pasqua Lakes have a good supply of pike, pickerel, perch, suckers, buffalo fish and tullibee; and there has been more whitefish caught there during the past season than for five years, namely, forty fish, all taken by the Indians.

Qu'Appelle Lake has still a few whitefish, and an abundance of tullibee and other fish. He saw thousands of tullibee at the dam last spring passing up, but there were very few whitefish among them.

In Mission Lake the catch of whitefish was better than for some years past, one fisherman taking as many as 35 in one haul, with three gill-nets, 45 yards in length each.

Katepwe Lake is the largest of the chain, and has the most fish of all kinds found in these waters. The level of this lake is about one foot higher than last year, which is due to the dam at Katepwe.

He is of the opinion that the close season could not be arranged at a better time, so far as the Qu'Appelle Lakes are concerned. The close season has caused a decided increase in the fish of all kinds, except whitefish, which were nearly exterminated before the regulations were enforced. Now a few are caught in all the lakes.

He gives the Indian catch of fish of all kinds as follows:—18,500 lbs., and the catch by whites and half-breeds as 23,500 lbs., or a total of 42,000 lbs.

	Lbs.	Value.
Whitefish.....	4,000 at 6 cts.	\$ 240 00
Tullibee.....	15,000 do 4 do	600 00
Pike.....	8,000 do 2 do	160 00
Pickarel.....	6,000 do 2 do	120 00
Suckers.....	9,000 do 1 do	90 00
Totals.....	42,000	\$1,210 00

Owing to the rigid enforcement of the regulations there has not been the same amount of fishing done as in other years. The Indians will not take out licenses, and the half-breeds say they cannot afford to pay \$2.00 for one. There were only nine fishermen, and free licenses were given to four Indians on Pasqua's Reserve to fish for their own use but not for sale. Free permits for one net of fifty yards length each were granted to four destitute or sick Indians to fish in close season. Free licenses for one net each were granted to two widowed half-breed women, who had no means of paying for a license.

Guardian Teader has seized, and delivered over to the Inspector, during 1893 in all twenty-seven gill-nets. Of these eleven belonged to half-breeds and sixteen to Indians. There is great difficulty in getting the Indians to observe the law as regards Sunday fishing, and the setting of nets in river channels and the mouths of streams, and fishing with the regulation-sized mesh. The nets seized were all under 5 inches, most of them 4½-inch mesh, and some of them as small as 3½ inches extension measure.

CROOKED AND ROUND LAKES DISTRICTS.

Mr. H. Sayer, who was guardian at Crooked Lake, resigned; and the services of Mr. Taillefer, who was guardian at Round Lake, were dispensed with. Special Guardian Gerald Fitzgerald was put in charge of both districts. Owing to the strict enforcement of the license regulation the catch was restricted to the taking of fish by means of hook and line, although a great many fish were taken in the streams early in the season illegally by means of spears and traps. No licenses were taken out. The catch was less than last year and was as follows, pike and suckers principally.

Crooked Lake—

	Lbs.	Value.
By Indians	10,000 at 2c.	\$200 00
Whites.....	30,000 "	600 00
Totals	<u>40,000</u>	<u>\$800 00</u>

No whitefish were caught.

	Lbs.	Value.
Round Lake.—Total catch.....	<u>5,000 at 2c.</u>	<u>\$100 00</u>

Guardian Fitzgerald heard of only one whitefish being caught in Round Lake.

The estimated catch by Indians and settlers in Fishing Lake, north-east of the Big Touchwood Hills is 15,000 lbs. pike and suckers, value \$300. The catch in the White Sand River and Pelly countries was as follows:—

	Lbs.	Value.
Pike.....	130,000 at 2c.	\$2,600 00
Suckers.....	70,000 " 1c.	700 00
Totals.....	<u>200,000</u>	<u>\$3,300 00</u>

CUMBERLAND HOUSE DISTRICT.

Special Guardian John A. Connor, corporal N. W. M. Police, who lives at Cumberland House, reports that he finds it impossible to give the exact number of fish caught. He has done his utmost, and with poor success. It is also impossible to get at the number of the different varieties, as the Indians keep no account of them. He reports this to have been the poorest fall fishing known in this district for several years; but does not explain why. The nets are up to the proper size, some are a shade small, but will soon be changed. The population of Cumberland is 383, including the Treaty people.

THE PAS DISTRICT.

I have received no annual Report from the guardian, Isaiah Buck, but the close season was enforced and well observed there, for a space of 21 days during the spawning time of the whitefish. As the district is peopled solely by half-breeds and Indians, who live almost entirely on fish, and as it was the first time your department had attempted to enforce the law, twenty-one days was considered enough to start with.

I have the honour to be, sir,

Your obedient servant,

F. C. GILCHRIST,

Inspector of Fisheries.

REPORT ON THE SPAWNING OF THE WHITEFISH IN LONG LAKE, ASSA.,
N. W. T., BY F. C. GILCHRIST, INSPECTOR OF FISHERIES.

The present close season for whitefish in the North-west Territories extends from the 5th October to the 15th December. Several years ago, when I was overseer, it was represented to me that the whitefish in Long Lake did not spawn until "Christmas week." At that time the close season ran until the end of November only, and it was thought that if the whitefish did not spawn until the time stated a serious drain on the fisheries of Long Lake was going on; and one which, as fishing for the markets increased, would in a very few years deplete it of its whitefish. I brought matters before the department, but it was considered inadvisable to take such a serious step, as the lengthening of the close season over the whole territories for the sake of the fisheries of one lake; and especially as it was not shown at all conclusively, that the whitefish in that lake did not spawn within the close season. Since that time evidence proving that the close season was too short for several lakes in the North-west has been brought to the notice of the department; and, in consequence, the close season was extended to the 15th December. Still this was not long enough, and in December, 1892, I went to Long Lake and had a net set, and carefully examined all the whitefish caught. The results showed that the fish were in the height of spawning about the 15th to the 20th of the month, and, as empowered by the Fisheries Act, I refused to grant licenses till after the 1st January, by which time almost all the fish had finished spawning, and the fishermen began operations. Acting under instructions Overseer Foster set a short net in Long Lake under the ice on the 1st, 16th and 20th December, 1893, and on the 4th January, 1894, and caught a number of whitefish, which he labelled and carefully packed and shipped to me. These were examined, and the results with the observations of 1892, are embodied in detail in the following table:—

Table No. 1.

This table has the observations pertaining to the spawning only; and does not contain those that were taken at the same time referring to food, length of fish, etc., although I quite understand that in a critical diagnosis the contents of the stomach would have a considerable bearing on the results to be arrived at. Each fish was taken, and carefully measured from the end of its nose to the fork of its tail; accurately weighed, examined as to its condition, the amount of fat or its absence on the stomach and entrails being taken as a criterion; condition of the ovaries or milts as to spawning, and the character of food in the stomach and gullet. The results of the observations were astonishing, and are worthy of close study. In table No. 2 I have attempted to group the results, so as to put them in a more intelligible shape.

Table No. 2.

In this table, under the head of "Spawning" I have put not only those fish that were actually spawning, from just beginning to nearly spent, but also those that were "just ripe"; that is, those fish whose ovaries and milts were breaking but had not yet

begun to spend. Under the head of "Spent" were put those fish whose generative organs were entirely spent; but still had a mixed look and were more or less inflamed. These were quite distinct from those fish coming under the head of "Spent for weeks," that had spawned so long before that their organs had regained their normal condition, and the fish were fat and prime.

To summarize, throwing out those fish caught in February and October, 1893, which are not particularly relevant:—

30	fish	caught	between	the	1st	and	20th	December,	1892-93,	were	not	ripe.	
23	do	do			15th	and	20th	do	do				
58	do	do			1st	Dec.,	1892-93	and	4th	Jan.	1894,	were	spawning.
52	do	do			15th	do	do	do	do				
19	do	do			1st	do	do	do	do	had	spawned	long	ago.
0	do	do			8th	do	and	19th	Dec.,	1892,	were	"just	spent.'
2	do	do			16th	do	do	do	do				
2	do	do			4th	January	1894	do	do	spawning.			
5	do	do			do					were	"just	spent."	
6	do	do			do					had	spawned	long	before.

On the 18th December, 1892, I examined without cutting open, about 80 white-fish that had been caught the night previous, 20 miles up the lake, in deeper water and on a harder bottom, none of which were frozen, and found a number of them to be not yet ripe; the rest were in various stages of spawning, and I did not see one that was spent.

This proves that the action of the department in refusing to allow fishing between the 15th December and the 1st January in Long Lake was the correct one; but it does not, by any means, settle the question of the spawning time of the white-fish in this lake. We know the time when the fish are in the height of spawning, and about when they have finished; but we do not know when those fish that come under the head of "spent for weeks" spawned. Out of the 131 fish caught and examined 27 come under this heading. None of the 27 were caught in October; and of the 9 fish taken in that month, not one was far enough advanced to spawn, and regain a condition fit to put it under the head of "Spent for weeks." One may theorize, but theories and ideas are not the things upon which to base laws and regulations that will, on the one hand, prevent people from catching and using fish they are really in need of, or, on the other, will allow them to go in and fish at a time when, if the fish are to be preserved, netting should be strictly prohibited. The many ideas we see advanced in print and on platforms, without proof even when it is asked for, as to the feeding and breeding habits of different fishes; the destructiveness of one kind of fish upon the ova, fry or adults of another, and as to the many other questions pertaining to the life history of fishes, teach one the necessity of care and accuracy; and it is in this spirit that the present report is submitted.

TABLE No. 1.

No.	When Caught.	Where Caught	Depth of Water and Character of Bottom.	Weight of Fish.	Condition of Fish.	Ovaries.	Milts.	Remarks.
	1892.			lbs. oz.				
5	Dec. 8	Long Lake, Assa., on west side, 3 miles from south end.	7 ft. under ice, soft clayey mud.	2 12	Fair		Full, not ripe.	
6	do 8	do	do	4 8	Good	Full, not ripe		
7	do 12	do	do	4 0	Very fat	Very small ribbons.		Eggs just discernable.
8	do 15	do	do	2 12	Fair		Half spent	
9	do 15	do	do	2 14	do		do	
10	do 15	do	do	3 6	do		Full, not ripe.	
11	do 15	do	do	3 8	Good	Ripe but full		
12	do 15	do	do	3 12	do	do		
13	do 15	do	do	2 2	Fair		Ripe but full.	
14	do 15	do	do	3 8	Good	Nearly ripe.		Very full ovaries.
15	do 15	do	do	3 12	Fair	Partly spent		
16	do 15	do	do	3 8	do	do		
17	do 15	do	do	3 5	do		Ripe but full.	
18	do 15	do	do	2 10	Very fat	2 strips		
19	do 15	do	do	2 12	Fair		Nearly spent.	
20	do 15	do	do	3 8	do	Ripe but full		
21	do 15	do	do	2 10	Very fat	See No. 7.		
22	do 15	do	do	3 2	Fair		Nearly spent.	
23	do 15	do	do	2 8	do	do		
24	do 15	do	do	3 4	do		Not ripe, very full.	
25	do 15	do	do	2 14	do	Not ripe.		Ovaries weighed 9 oz.
26	do 15	do	do	2 12	do		Ripe	
27	do 15	do	do	3 2	do		Partly spent.	
28	do 15	do	do	3 6	do	Ripe		do
29	do 15	do	do	3 3	do	Not q'te ripe		
30	do 15	do	do	4 6	do	Ripe		
31	do 15	do	do	2 7	do		Nearly spent.	
32	do 15	do	do	3 12	do		Partly spent.	
33	do 15	do	do	2 14	do		Not ripe.	
34	do 15	do	do	3 8	do		do	
35	do 15	do	do	3 8	do	Not q'te ripe		Ovaries weighed 10 oz.
36	do 15	do	do	2 6	do		Not ripe.	
37	do 15	do	do	3 0	do		Half spent.	
38	do 15	do	do	2 12	Poor		do	
39	do 15	do	do	2 7	Fair		Nearly spent.	
40	do 15	do	do	2 10	do		Not quite ripe.	
41	do 15	do	do	3 0	do		do	
42	do 15	do	do	2 14	do		do	
43	do 15	do	do	3 14	do	Not q'te ripe		
44	do 15	do	do	3 10	do		Half spent.	
45	do 15	do	do	3 0	do	Ripe		
46	do 15	do	do	4 0	do		Half spent.	
47	do 15	do	do	2 8	Poor	Nearly spent		
48	do 15	do	do	3 0	Fair		Ripe	
49	do 16	do	do	2 6	do		Half spent.	
50	do 16	do	do	3 0	do		do	
51	do 16	do	do	3 0	do	Ripe		
52	do 16	do	do	2 10	Poor		Ripe	
53	do 16	do	do	4 7	Fair	Not q'te ripe		Ovaries weighed 12 oz.
54	do 16	do	do	3 14	Good	do		
55	do 16	do	do	3 8	do	do		do
56	do 16	do	do	4 8	do	do		
57	do 16	do	do	3 4	Fair		Ripe	
58	do 16	do	do	3 12	do	Not q'te ripe		
59	do 16	do	do	3 2	do	do	Half spent.	
60	do 16	do	do	2 12	Poor		do	
61	do 16	do	do	2 2	Very fat		Strings	Milts undeveloped.

TABLE No. 1—Continued.

No.	When Caught.	Where Caught	Depth of Water and Character of Bottom.	Weight of Fish.	Condition of Fish.	Ovaries.	Milts.	Remarks.
	1892.			lbs. oz.				
62	Dec. 16	Long Lake, Assa., on west side, 3 miles from south end.	7 ft. under ice, soft clayey mud.	3 0	Poor		Half spent	
63	do 16	do ..	do ..	3 14	Fair		do	
64	do 16	do ..	do ..	3 8	do	Ripe		
65	do 16	do ..	do ..	3 13	Poor		Half spent	
66	do 16	do ..	do ..	6 2	Good		do	
67	do 16	do ..	do ..	2 4	Very fat		See 61	
68	do 16	do ..	do ..	3 4	Fair		Ripe	
70	do 16	do ..	do ..	2 10	do		Nearly spent	
71	do 16	do ..	do ..	3 11	do	Not q'te ripe		
72	do 16	do ..	do ..	3 6	do	Half spent		
73	do 16	Long Lake, Assa., on east side, 12 miles from south end.	12 ft. under ice, soft clayey bottom.	3 4	do	Ripe		
74	do 16	do ..	do ..	4 0	Good	do		
75	do 17	do ..	do ..	4 0	do	Not q'te ripe		
76	do 17	do ..	do ..	3 8	Fair	Ripe		
77	do 18	do ..	do ..	3 0	do	Just ripe		
78	do 18	do ..	do ..	3 5	Poor	Half spent		
79	do 18	do ..	do ..	3 0	Fair		Half spent	
80	do 18	do ..	do ..	4 0	do	Not q'te ripe		
81	do 19	Long Lake, Assa., same as No. 70.	7 do	2 4	Good		Not quite ripe.	
82	do 8	do ..	do ..	4 0	Fair	Just ripe		
83	do 12	do ..	do ..	3 4	do		Not quite ripe.	
	1893.							
84	Feb. 15	Long Lake, Assa., 6 miles from south end.	40 do	5 12	Good		Ribbons	
85	do 15	do ..	do ..	5 12	Fair	Ribbons		
86	do 15	do ..	do ..	6 4	Good	do		
87	do 15	do ..	do ..	5 4	Poor	do		
88	do 15	do ..	do ..	6 8	Fat		Strings	
89	do 15	do ..	do ..	5 14	Very fat		do	
90	do 15	do ..	do ..	6 6	do		do	
91	do 15	do ..	do ..	5 12	do		Narrow ribbons	
142	Oct. 19	Long Lake, Assa., same as No. 70.	7 feet open water, soft clayey bottom.	3 8	Fair	Not ripe(8oz)		Ova 6 weeks or more from ripe.
143	do 19	do ..	do ..	4 10	do	do		do
144	do 19	do ..	do ..	6 6	do	do (12 oz)		do
145	do 19	do ..	do ..	3 6	do	do		Ova more than 6 weeks from ripe
146	do 19	do ..	do ..	4 14	do	4 weeks from ripe		
147	do 19	do ..	do ..	3 6	do	See 145		
148	do 19	do ..	do ..	4 6	do		Far from ripe	
149	do 19	do ..	do ..	2 12	do	See 142		
150	do 19	do ..	do ..	3 6	do		Far from ripe	
151	Dec. 1	Long Lake, Assa., west side, 3 miles from south end.	7 ft. under ice, soft clayey bottom.	2 14	Good		Full but not ripe.	

TABLE No. 1--*Concluded.*

No.	When Caught.	Where Caught	Depth of Water and Character of Bottom.	Weight of Fish.	Condition of Fish.	Ovaries.	Milts.	Remarks.
	1893.			lbs. oz.				
152	Dec. 1	Long Lake, Assa., west side, 3 miles from south end.	7 ft. under ice, soft clayey bottom.	3 0	Very fat	See remarks.	.....	Ova sacs very small, eggs hardly discernible, bright, and no inflammation.
153	do 1	do ..	do ..	3 2	Fair....	Full and just ripe.	.....
154	do 1	do ..	do ..	2 6	Fat ...	See No. 152.	.....
155	do 1	do ..	do ..	2 8	Good...	See 151.	.....
156	do 1	do ..	do ..	2 12	do ..	do ..	.....
157	do 1	do ..	do ..	2 14	Fair....	do ..	.....
158	do 1	do ..	do ..	4 0	Very fat	See No. 152.	.....
159	do 1	do ..	do ..	3 0	Fair....	Just ripe.	.....
160	do 1	do ..	do ..	2 4	do ..	do ..	.....
161	do 1	do ..	do ..	3 4	Very fat	See No. 152.	.....
162	do 1	do ..	do ..	2 14	Poor ...	Just ripe ..	.....
163	do 16	do ..	do ..	2 12	do ..	Ripe ..	.....
164	do 16	do ..	do ..	2 8	Very fat	See No. 152.	.....
165	do 16	do ..	do ..	2 8	do ..	do ..	.....
166	do 16	do ..	do ..	2 10	Poor ...	Ripe ..	.....
167	do 16	do ..	do ..	3 8	Very fat	See No. 152.	.....
168	do 16	do ..	do ..	3 6	Poor ...	Just spent..	.....	Ovaries had mixed look and inflamed.
169	do 16	do ..	do ..	3 4	Very fat	See No. 152.	.....
170	do 16	do ..	do ..	4 0	Poor....	See 168....	.....	Ovaries weighed 7 oz.
171	do 20	do ..	do ..	2 10	do ..	Full but not quite ripe.	.....
172	do 20	do ..	do ..	2 12	do ..	Half spent....	.....
173	do 20	do ..	do ..	2 8	Fat	See No. 152.	.....
	1894.							
174	Jan. 4	Long Lake, Assa., at Cain's Point 5 miles from south end.	8 ft. do	.. 2 12	Fair....	Just ripe ...	.....
175	do 4	do ..	do ..	2 6	Fat....	See No. 152.	.....
176	do 4	do ..	do ..	3 8	Very fat	do ..	.....
177	do 4	do ..	do ..	2 6	do ..	Strings.....	.....
178	do 4	do ..	do ..	1 12	Fair....	just spent....	.....	Milts very small, soft and infla'd.
179	do 4	do ..	do ..	3 12	Fat	See No. 152.	.....
180	do 4	do ..	do ..	3 6	Poor ...	do 168.	.....
181	do 4	do ..	do ..	2 2	Very fat	do 152.	.....
182	do 4	do ..	do ..	6 2	Good...	Half spent....	.....
183	do 4	do ..	do ..	1 9	Fair...	Strings.....	.....
184	do 4	do ..	do ..	1 6	do ..	Strings.	.....
185	do 4	do ..	do ..	2 12	Poor ...	Just spent..	.....	See No. 168.

TABLE No. 2.

Date when caught.			Sexes.	Not ripe.	Spawning.	Spent for weeks.	Spent.
8th December, 1892			{ Female...	1	1		
			{ Male	1			
12th do do			{ Female...			1	
			{ Male	1			
15th do do			{ Female...	5	9	2	
			{ Male	8	17		
16th do do			{ Female...	6	5		
			{ Male		12	2	
17th do do			{ Female...	1	1		
			{ Male				
18th do do			{ Female...	1	2		
			{ Male		1		
19th do do			{ Female...				
			{ Male	1	1		
15th February 1893			{ Female...			3	
			{ Male			5	
19th October, do			{ Female...	7			
			{ Male	2			
1st December do			{ Female...		2	4	
			{ Male	4	2		
16th do do			{ Female...			4	2
			{ Male		2		
20th do do			{ Female...	1		1	
			{ Male		1		
4th January, 1894			{ Female...		1	4	3
			{ Male		1	1	2

FISHERY STATISTICS in the North-west Territories.

	Popula- tion.	Number of Whitefish.	Number of Tullibee.	Pike, Lake Trout, &c.	Sturgeon.	Gold-eyes and Suckers.
Cumberland District.....	2,700	2,000,000	.....	1,000,000	.....	.....
Montreal and Lac La Rouge.....	500	180,000	.....	90,000	.....	.....
Sturgeon Lake.....	250	1,500	.....	1,000	.....	.....
Green and Assiniboine Lakes....	600	166,666	.....	84,000	.....	.....
Isle à la Crosse.....	250	120,000	.....	60,000	.....	.....
Snake Plain and adjacent small lakes	400	15,000	.....	15,000	.....	.....
Prince Albert District						
North and South Saskatchewan as far east as La Corne.....				1,100	3,150	7,000
Fishing lakes south of South Sas- katchewan				3,500	.....	1,500
Population	4,700					
No. of fish.....		2,583,166	.....	1,254,600	3,150	8,500
No. of lbs		10,332,664	.....	7,527,600	47,250	8,500
Battleford District		80,000	.....		
Lac La Biche District		215,000	.....		
Edmonton do		150,000	.....		
Pigeon Lake do		80,000	.....		
Eagle Quill Lake District.....		3,000	.....		
Long Lake do		47,000	.....	35,000	.....	25,000
Qu'Appelle Lakes do		4,000	15,000	14,000	.....	9,000
Crooked & Round Lakes District.			.....	45,000	.....
Fishing Lake and White Sand River District .....			.....	145,000	.....	70,000
Totals in lbs.....		10,911,664	15,000	7,766,600	47,250	112,500
Values		\$600,141 50	\$ 450 00	\$155,332 00	\$1,417 50	\$1,125 00

RECAPITULATION of the Fisheries in North-west Territories.

Kinds of Fish.	Quantity.	Value.
	Lbs.	\$
Whitefish.....	10,911,664	600,141 50
Tullibee	15,000	450 00
Pike, pickerel and lake trout ..	7,766,600	155,332 00
Sturgeon	47,250	1,417 50
Suckers, gold-eyes, &c.....	112,500	1,125 00
Totals.....	18,853,014	758,466 00

RECAPITULATION

Of the Yield and Value of the Fisheries of **Manitoba** and **North-west Territories**, for the Year 1893.

Kinds of Fish.		Quantity.	Value.
			\$ cts.
Whitefish.....	Brls.	672 $\frac{1}{2}$	6,725 00
do	Lbs.	15,307,419	819,929 50
Pickarel.....	"	1,366,971	33,343 00
Pike.....	"	7,573,060	151,461 00
Sturgeon.....	"	84,450	2,533 50
Tullibee.....	"	68,600	2,058 00
Mixed and coarse fish.....	"	1,240,800	12,408 00
Home consumption not included above.....	"	1,363,515	13,635 00
Total.....			1,042,093 00

APPENDIX No. II.

BRITISH COLUMBIA.

ANNUAL REPORT ON THE FISHERIES OF BRITISH COLUMBIA FOR THE
YEAR 1893.

NEW WESTMINSTER, 10th January, 1894.

Honourable Sir CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual statistical report of the fisheries of British Columbia for the year ending 31st December, 1893.

During the season I issued 1,625 licenses to fish for salmon with drift nets, viz.:

To cannery men on the Fraser River	508
Fishermen do	522
Exporters and traders do	28
Farmers do	14

Northern coast and rivers—

To canneries.....	295
Fishermen	258

1,625

I also issued licenses for seven seines, and one license granting an exclusive privilege to fish for commercial purposes in the Kimpkish River.

The output of salmon from the Fraser River canneries during 1893 was over 50 per cent greater than the output of any former year in the history of the industry, while the export of salmon (fresh in ice) has also largely increased.

The value of salmon canned in the province in	
1893 at 10 cents per 1 pound can is.....	\$2,916,990 80
1892, at 12 cents per 1 pound can.	1,378,631 04
Increase in 1893.....	<hr/> \$1,538,359 76

The products of the fisheries in the aggregate also show a very large increase over former years. Estimated at the prices quoted in 1892, the result shows a balance in favour of 1893 of \$2,444,171. At the reduced quotations adopted the comparison is:

1893—total value.....	\$4,437,963 20
1892 do	2,849,483 64
Increase 1893.....	<hr/> \$1,588,479 56

The catch of fur seal skins shows a large increase compared with that of 1892:

1893, at \$12 per skin	\$837,984
1892, at \$13 per skin.....	602,706
	<hr/>
Increase, 1893	\$235,278
	<hr/>

Although several new canneries were built in 1893, their value has been offset by the decrease in the sealing fleet, leaving the amount of capital invested in the various branches of the fishing industry in 1893 almost identical with that employed in the previous year.

Total capital invested, 1892	\$1,771,352
do do	1,721,527
	<hr/>
Decrease, 1893.....	\$49,825
	<hr/>

The number of hands employed in fishing, canning and sealing during 1893 was 13,943, against 8,170 in the previous year.

The establishment of extensive salmon fisheries at Point Robert, but a few miles from the mouth of the Fraser River, where trap-nets having very long leaders are used for the capture of salmon, are looked upon as a source of danger to the industry on the Fraser by many of our most experienced fishermen. Whether the existence of extensive traps so near the entrance of the river will prove detrimental beyond catching great quantities of salmon, which would otherwise enter the Fraser River, remains to be seen; but in the meantime effective means should be used to guard against any encroachment or poaching by fishermen employed in connection therewith.

Shad are becoming more plentiful in the Fraser River, and also at Rivers Inlet. Preparations are being made to prosecute Sturgeon fishing on a larger and more systematic manner than formerly.

PROTECTION OF FISHERIES.

The fishery protection service during the season was satisfactory, but with the opening of the inland waters to net fishing, and a yearly increasing number of saw mills being erected, together with a large increase in the number of hydraulic mines expected to be in operation next summer on creeks which flow into the Fraser River, it will be necessary to provide for a more thorough system of protection of the inland waters of the province.

REPORTS OF FISHERY GUARDIANS.

Fraser River.—Guardian Grant reports that notwithstanding the great number of fishermen employed on the river, he found but very few violations of the regulations, all of which he promptly reported; that he patrolled the river daily in the steam launch, and is satisfied that the weekly close time was strictly observed in his district.

Naas River.—Guardian Spain reported that the salmon were scarce in his district, and the pack small, that the fishery regulations were well observed, and that no violation of the law had occurred in his district.

Rivers Inlet.—Guardian Wm. Roxbury reports that the fishing on Rivers Inlet has been very good this year.

The run of fish was steady and continuous giving canners ample time to complete their pack, and put up a few salt fish.

Had it not been for an attack of "la grippe" or influenza amongst the employees of the canneries, the pack would have been filled up in much less time than usual, in fact the Indian fishermen say it has been the best run for twelve years.

There was no waste of fish at the canneries as the weather was cool, and the boats were taken off as soon as the supply of fish was greater than they could get away with.

I had some trouble at the commencement of the season with the Indian fishermen. They have the idea that because they cannot fish as high up the river as they please, their rights are being encroached on; and although they came down when ordered, yet they were saucy and slow to do so, but by explaining to them the object of the limit, and watching them closely, I had no trouble with them towards the close of the season.

I would suggest, however, that next season a beacon be placed in the middle of the river to mark the limit. This would be visible and tangible and the Indians would understand it better than a line from N.E. to S.W., and as some of the Indians cannot or will not understand either Chinook or English, would save a deal of good deal of explanation. This beacon could be put up by the guardian with very little help.

NEW WESTMINSTER, B.C., 16th December, 1893.

Skeena River.—Guardian Thos. McNeist report: Sir,—I have the honour to report as fishery guardian of the Skeena River district for the past season.

According to your instructions I left Westminster on the 29th of April for Skeena River via Victoria, and arrived there on the 6th May. Upon my arrival there I found a number of Indian boats fishing without licenses. The reason of this is that licenses are only obtainable at New Westminster. On payment of the license fee of \$20.00, I allowed them to continue fishing and forwarded the amount and application to you. As many of the Indians come from the interior and do not arrive at the coast till the fishing season is about to commence, and as there is such long intervals between mails it is impossible for them to get their licenses in time to fish during the season.

I regret to state that the present season's operations were not successful.

This being an off year, or year of small run, and not perhaps so much on account of a small run as the want of snow in the mountains to create a freshet to discolour the water, and therefore the fish could not be caught by gill-nets, the canners failed to get more than two-thirds of a pack.

The law was well observed during the fishing season with two exceptions.

One a violation of the weekly close time which is to be attributed more to the ignorance of the Indians than an attempt of the cannery manager to evade the law.

The other was, in my opinion, the wilful neglect of the manager, and for both of which offences fines were collected.

I have the honour to be, sir,

Your obedient servant,

JOHN McNAB,

Inspector of Fisheries for British Columbia.

A.—SCHEDULE of Canneries operated in British Columbia during the Season of 1893.

Owner or Agent.	Name of Cannery.	Year first operated.	No. of boats.	No. of hands.	Packed in 1-lb. cans.	
					1892.	1893.
<i>Fraser River.</i>						
Bon Accord Fishing Co.....	Bon Accord	1879	27	211	884,480	2,109,600
	Sea Island	1890	40	240		
J. H. Todd & Son.....	Beaver	1889	35	270	609,600	1,573,536
	Richmond	1882	35	270		
Ewen & Co.....	Ewen's	1876	40	332	384,000	2,112,000
H. E. Harlock & Co.....	Harlock's	1882	30	220	200,064	722,640
B. C. Canning Co., (London)	Fraser River Cannery.	1876	30	270	36,400	640,900
	Delta	1887	40	250	204,000	872,960
Victoria Canning Co.....	Wellington	1880	40	230	288,000	615,200
T. E. Ladner, Manager.....	Laidlaw's	1878	40	250	192,800	610,122
	Holly	1890	40	250	180,000	662,400
	Wadham's	1887	40			
	British Columbia.....	1887	36			
	British American	1887	36			
Anglo-British Columbia Packing Co. (Limited), H. Bell-Irving, Agent, Vancouver, B.C.	Canoe Pass	1889	36	3,000	1,532,208	6,296,832
	Phoenix	1887	36			
	Gary Point	1889	36			
	Annandale.....	1891	36			
	Dumfries	1891	36			
Terra Nova Packing Co.....	Terra Nova	1892	35	270	216,000	794,400
Lulu Island Canning Co.....	Lulu Island	1893	30	210		1,032,000
Pacific Coast Packing Co.....	Pacific Coast	1893	30	290		736,800
Stemston Canning Co.....	Stemston	1893	30	270		1,056,000
Short & Squires	Imperial	1893	30	290		816,000
Canada Pacific Packing Co.....	Canada Pacific	1893	35	400		1,296,000
Brunswick Canning Co..	Brunswick	1893	30	262		816,000
	Total Fraser River				3,217,552	22,763,380
<i>Skeena River.</i>						
Rithet & Co.....	Standard	1890	40	185	540,000	354,432
Byrnes & Cuthbert.....	Balmoral	1886	30	182	540,000	305,856
Dalby & Claxton.....	Royal Canadian	1892	40	242	576,000	456,000
Cunningham & Son.....	Skeena	1883	39	220	540,000	387,120
A. B. C. Packing Co.....	British American	1883	30	196	540,000	364,800
do do	North Pacific.....	1889	40	153	540,000	355,200
B. C. Canning Co., London.....	Windsor.....	1878	40	209	540,000	321,600
Turner, Beeton & Co.....	Inverness	1878	40	185	540,000	288,000
Cunningham & Rood.....	Low's Inlet Cannery..	1890	8	136	540,000	420,144
<i>Naas River.</i>						
Federation Canning Co.....	Federation.....	1888	40	169	540,000	360,000
Rithet & Co.....	Cascade.....	1889	30	141	360,000	200,640
B. C. Canning Co., London.....	B. C. Cannery	1889	30	157	352,800	192,000
<i>Rivers Inlet.</i>						
B. C. Canning Co., London, Eng {	Rivers Inlet Cannery..	1882	35	200	264,000	720,000
	Victoria	1882	35	200	230,400	500,000
McNeil & McDowell.....	Warnock	1884	35	186	223,440	480,000
S. A. Spencer.....	Alert Bay Cannery....	1881	8	100	206,400	177,936
H. Price & Co	Price's Cannery	1836	24	73	288,000	312,000
Dearnly & Skitbolt.....	Nanaimo Cannery	1893	8	62		210,800
	Total Coast.....				7,211,040	6,406,528
	Fraser River.....				4,217,552	22,763,380
	Grand Total					29,169,908

B.—RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Number of Men engaged in the Fisheries, Quantity of Value of Fishing Materials, Kinds and Quantities of Fish, &c., in the Province of British Columbia, for the Year 1893.

Locality.	VESSELS AND BOATS EMPLOYED.				FISHING MATERIALS.				KINDS OF FISH AND FISH PRODUCTS.								
	Vessels.		Boats.		Gill-nets.		Seines.		Value of trawl lines.	Salmon, fresh, lbs. *	Salmon, smoked, lbs.	Salmon, in cans. *	Sturgeon, lbs.				
	No.	Tonnage.	Value.	Men.	No.	Value.	Men.	Fathoms.						Value.			
Fraser River District, including Howe Sound and Burrard Inlet	26	550	102300	60	1465	50000	8342	176000	132000	1800	3000	1250	3966	2736000	91000	22763380	1300000
Howe Sound to Rivers Inlet	3	90	11000	9	130	5100	680	18550	13962	520	900	100	10000	6240	1877936	.....	.....
Rivers Inlet to Skeena River	10	450	60000	30	434	21000	2500	95400	71500	1150	2950	500	737	285200	.....	8775952	.....
Skeena River to Alaska	2	35	4500	6	125	6110	500	24500	18375	.....	.....	100	8000	20000	752640	.....	.....
East Coast of Queen Charlotte Islands .....	.....	.....	.....	.....	25	3750	110	2500	2500	250	350	2000	50	.....	2000	.....	.....
West Coast of Queen Charlotte Islands .....	.....	.....	.....	.....	20	2000	60	1200	900	300	450	250	.....	.....	.....	.....	.....
Cape Scott to Comox .....	.....	.....	.....	.....	12	1000	30	300	200	300	450	600	25	25000	5000	.....	.....
Comox to Victoria	50	250	10150	150	57	3000	100	1200	750	4000	7500	4000	60	500000	10000	200000	.....
Victoria to Cape Beale	2	40	1000	6	16	1100	45	750	430	1000	1500	5500	100	27500	8000	.....	.....
Cape Beale to Cape Scott .....	.....	.....	.....	.....	10	650	25	1000	750	.....	.....	150	550	2500	1000	.....	.....
Totals	93	1415	188900	261	2287	93710	12392	321400	241367	9320	17100	14250	5688	3594200	143240	29169908	330000

* I have reduced the quotation for salmon in cans from 12 cts. to 10 cts., their full value this season; I have also reduced the price quoted for fresh salmon from 10 cts. per pound, which was always too high, to 5 cts., their full value here; also salmon in barrels from \$12 to \$6, their full value this season.—J. MCNAB.

C.—REPORT of Catch, &c., of British Columbia Sealing Fleet, Season 1893.

Vessels.	Tons.	Value.	CREWS.		Boats.	Canoes.	Masters.	B. C. Coast.	CATCH.		Total.
			Whites.	Indians.					Japan Coast.	Russian Side.	
		\$									
Triumph	98	10,000	7	28	4	14	C. N. Cox.....	1,713	.....	623	2,336
Sapphire.....	108	10,000	8	26	12	3	Wm. Cox.....	1,262	.....	341	1,603
E. B. Marven.....	117	10,000	27	.....	8	.....	J. Gould.....	1,014	.....	517	1,535
Mascot.....	40	4,500	7	14	2	7	H. F. Simard.....	857	.....	327	1,184
Dora Simard.....	94	10,000	24	.....	7	.....	R. A. Lavender.....	1,426	.....	434	1,860
Labrador.....	25	4,500	11	.....	4	.....	J. J. Whitely.....	263	.....	.....	263
Minny.....	46	1,000	5	20	2	10	J. Mohrhouse.....	489	.....	20	509
Annie E. Paint.....	82	9,500	23	.....	8	.....	A. Bissett.....	740	.....	491	1,141
Mischief.....	45	7,500	6	20	2	10	W. Petit.....	344	.....	.....	344
Driard.....	50	7,000	19	.....	6	.....	A. Neilson.....	707	.....	294	1,001
Venture.....	48	5,000	4	16	2	8	G. McDonald.....	82	.....	.....	82
Mermaid.....	73	7,100	23	.....	8	.....	W. H. Whitely.....	940	.....	315	1,255
Fawn.....	59	7,500	3	21	2	10	S. Magnesen.....	806	.....	77	883
W. A. Earle.....	68	8,000	23	.....	6	.....	T. Magnesen.....	1,622	.....	.....	1,622
Beatrice.....	66	6,500	5	24	2	12	D. McAuly.....	655	.....	.....	655
Ocean Bell.....	83	8,000	25	.....	8	.....	J. O'Leary.....	1,316	.....	547	1,863
Mountain Chief.....	23	900	1	19	.....	9	Nawassunt.....	128	.....	.....	128
Arietas.....	86	8,000	23	.....	7	.....	A. Douglas.....	.....	964	464	1,384
Cape Beale.....	13	3,000	.....	10	.....	5	Quap.....	86	.....	.....	86
Kate.....	58	4,500	7	16	2	8	J. Floater.....	293	.....	.....	293
Favourite.....	80	6,000	7	26	3	13	L. McLearn.....	949	.....	.....	949
Borealis.....	37	8,000	6	20	2	10	G. Meyer.....	1,307	.....	.....	1,307
Ainako.....	75	7,500	5	14	1	7	G. Hester.....	1,344	.....	46	1,390
W. P. Saywards.....	64	6,000	5	16	1	8	G. Ferry.....	596	.....	.....	596
Katherine.....	82	4,000	6	19	2	9	W. McDougall.....	352	.....	363	715
San Jose.....	31	6,000	4	16	2	8	R. E. Crowell.....	242	.....	.....	242
Enterprise.....	69	10,000	24	.....	7	.....	J. W. Todd.....	.....	1,027	274	1,301
Agnes McDonald.....	107	9,000	25	.....	7	.....	M. F. Cutler.....	.....	2,333	433	2,766
Victoria.....	63	9,500	6	20	2	10	H. L. Hughes.....	420	.....	.....	420
Rosie Alsen.....	39	5,000	5	24	2	12	A. Whedden.....	658	.....	.....	658
Wanderer.....	25	3,000	4	16	1	8	H. Paxton.....	206	.....	.....	206
Lena.....	92	9,000	23	.....	6	.....	J. W. Anderson.....	.....	1,441	30	1,471
May Belle.....	58	7,000	20	.....	5	.....	C. J. Harris.....	.....	1,852	.....	1,852
Umbrine.....	98	10,000	24	.....	7	.....	— Campbell.....	.....	1,827	628	2,452
Penelope.....	70	11,000	20	.....	6	.....	F. Cole.....	.....	2,291	.....	2,291
Lena.....	60	1,090	19	.....	5	.....	W. Shields.....	.....	1,910	99	2,009
Pioneer.....	66	7,000	6	23	1	11	J. McLeod.....	1,050	.....	.....	1,050
Otto.....	86	12,000	8	24	2	12	M. Keefe.....	630	.....	397	1,027
May Taylor.....	42	4,000	18	.....	5	.....	E. Shields.....	845	.....	240	1,085
Brenda.....	100	10,000	26	.....	8	.....	C. E. Locke.....	845	.....	408	1,253
Libbie.....	93	10,000	23	.....	7	.....	H. Hackett.....	.....	1,242	389	1,631
City of San Diego.....	46	4,500	14	.....	5	.....	J. M. Pike.....	.....	942	101	1,043
Geneva.....	92	9,500	26	.....	8	.....	W. O'Leary.....	.....	1,612	454	2,066
Casco.....	63	6,000	19	.....	6	.....	O. Buckley.....	.....	1,473	199	1,672
Charlotte G. Cox.....	76	10,000	24	.....	7	.....	W. Byers.....	.....	2,396	376	2,772
Oscar and Hattie.....	81	9,500	24	.....	7	.....	W. E. Baker.....	.....	1,178	1,020	2,198
Teresa.....	63	6,000	20	.....	6	.....	E. Loreing.....	.....	677	147	824
Sadie Purple.....	56	10,000	24	.....	7	.....	C. L. Blanc.....	.....	927	475	1,402
Maud S.....	97	6,000	24	.....	7	.....	R. E. McKeil.....	.....	989	58	1,047
May Ellen.....	63	6,000	23	.....	7	.....	W. O. Hughes.....	.....	1,573	406	1,979
W. L. Rich.....	76	10,000	24	.....	7	.....	S. Balcom.....	1,321	.....	577	1,838
Annie C. Moore.....	113	10,000	26	.....	8	.....	J. Daley.....	.....	822	333	1,155
W. P. Hall.....	98	9,000	23	.....	7	.....	J. A. Brown.....	.....	768	263	1,031
Beatrice.....	49	4,500	20	.....	5	.....	.....	.....	1,411	39	1,450
C. D. Rand.....	67	6,500	21	.....	6	.....	.....	1,060	.....	.....	1,060
	3,743	384,200	847	432	256	204					68,231
Indian catch in canoes								2,035	66	.....	2,101
Caught by American vessels and landed in Victoria											70,332
Grand Total.....											260
											70,592

256 boats, \$100 each..... \$ 25,600

204 canoes, \$25 each..... 5,100

D.—CAPITAL invested in Fisheries and Fishing Material, including the Fur Seal Fleet, Boats, &c., of British Columbia, during the Year 1893.

Material.	Value.	Total.
	\$	\$
44 salmon canneries, complete	880,000	
12 oil factories.	38,000	
2 freezing establishments.	18,000	
7 salteries	4,200	
93 fishing vessels, 1,415 tons, manned by 261 men.	188,950	
2,287 boats employed in fishing.	93,710	
321,000 fathoms of gill-nets.	241,367	
9,320 do seines.	17,100	
Trawl lines	14,250	1,495,577
256 boats employed in fur-seal fishing	25,600	
204 canoes do do	5 100	
55 vessels do do	384,200	414,900
Grand total.		1,910,477

Hands employed in connection with fishing in boats.	12,392
do do vessels.	261
Sailors and hunters in sealing fleet—	
Whites.	847
Indians.	432
	<u>13,932</u>

**E.—RECAPITULATION of the Yield and Value of the Fisheries of British Columbia,
for the Year 1893.**

Kinds of Fish.	Quantity.	Price.		Value.	
		\$	cts.	\$	cts.
Salmon, in 1-lb. cans.....	29,169,908		0 10	2,916,990	80
do fresh.....	Lbs. 3,594,200		0 05	179,710	00
do salted.....	Brls. 5,688		8 00	45,504	00
do smoked.....	Lbs. 143,240		0 06	8,504	40
Sturgeon, fresh.....	" 330,000		0 05	16,500	00
Halibut do.....	" 1,373,900		0 05	68,695	00
Herring do.....	" 458,000			22,900	00
do smoked.....	" 8,700		0 10	870	00
do salted.....	Brls. 250		6 00	1,500	00
Oulachons, fresh.....	Lbs. 186,000		0 05	9,300	00
do smoked.....	" 17,500		0 06	1,050	00
do salted.....	Lbs. 948		8 00	7,584	00
Trout, fresh.....	Lbs. 56,400		0 10	5,640	00
Fish, assorted and mixed.....	" 304,750		0 05	15,237	50
Smelts, fresh.....	" 80,000			4,000	00
Cod-fish, fresh.....	" 462,000		0 06	27,720	00
Skill, salted.....	Brls. 77		8 00	616	00
Fur-seal skins.....	No. 70,332		12 00	843,984	00
Hair do.....	" 4,150		0 75	3,112	50
Sea-otter skins.....	" 15		125 00	1,875	00
Oysters.....	Bush. 4,000		2 00	8,000	00
Clams.....	Shell. 12,500		0 85	10,625	00
Mussels.....	" 600		0 80	480	00
Crabs.....	No. 600,000		0 03	18,000	00
Abalones.....	Lbs. 3,000		0 20	600	00
Isinglass.....	" 2,000		0 30	600	00
Shrimps and prawns.....	"			5,000	00
Estimate of the fish consumed in the province and not included in the above enumeration.....				150,000	00
Fish oil.....	Galls. 172,250		0 40	68,900	00
Guano, made from offal.....	Tons. 15		25 00	375	00
Value of fur-seal skins landed in Victoria by United States vessels.....				4,443,963	20
Total.....				3,120	00
				4,447,083	20

APPENDIX No. 12.

ONTARIO.

SYNOPSIS OF FISHERY OVERSEERS' REPORTS IN THE PROVINCE OF
ONTARIO, FOR THE YEAR 1893.

LAKE OF THE WOODS DIVISION.

Officer J. W. Colcleugh, of Rat Portage, who has charge of the Lake of the Woods, issued twenty-six fishing licenses during last season. The yield of whitefish alone exceeds 360,000 lbs. The other kinds are pickerel, pike and sturgeon. The total catch of fish is valued at \$30,600.

LAKE SUPERIOR DIVISION.

Overseer D. F. Macdonell again refers to the great difficulty he experiences in obtaining reliable data from fishermen of their catch of fish. There is a slight improvement in the general yield of fish in this district, even in trout and whitefish. During the close season he made two general trips over his division, but found no evidence of any violation of the laws. All nets measured by him were of the regulation size. The Indians also observed the close seasons better than usual. Early in the season this officer notified all the fishermen in this district that any infraction of the law regarding the throwing of offal in the lake would be severely dealt with, and he thinks that it had the effect of curtailing this evil practice among fishermen. Mr. Macdonald prefers fishing with pound nets to the use of gill-nets. The value of the fisheries of the upper part of Lake Superior, as far as Otter Head, is given at \$94,670, an increase of \$5,000 over 1892.

Overseer T. H. Elliott, in the Lake Superior portion of his division, reports an increase of 86,000 lbs. of whitefish over last year. This is ascribed to the fact that the Lizard Island grounds were fished this year, and also to the protection of the Sandy and Parisienne Islands' grounds, where fishing this season was better than for many years. There was a slight decrease in the catch of salmon trout as the boats engaged in fishing for salmon trout in 1892 at Lizard Island, were this season employed in fishing for whitefish. The adoption of the system of licensing boats instead of areas gave general satisfaction in these waters. The yield of this southern portion of the lake is valued at \$88,567, making a grand total value of \$183,237, for the whole of Lake Superior, being an increase of \$22,500, over the yield of the previous year.

LAKE HURON.

North Channel, or Manitoulin Island Division.

Mr. Elliott, who has also charge of this division extending to French River on Georgian Bay, reports a considerable decrease in the different kinds of fish, except coarse fish, and says:

"This large decrease in this season's catch of whitefish (715,000 lbs.), and trout (169,500 lbs), is mainly due to over fishing with increased plants while it is clearly shown that the whitefish grounds on Georgian Bay are being gradually depleted. At Squaw Island alone each boat was two tons short of its last year's catch, and the

catch of many of the fishermen did not pay expenses. At Cockburn Island, with one exception, fishermen were in debt at the close of the season after paying for their twine and help."

"In this division (North Channel) whitefish were never so scarce before, they seemed to have either left those grounds or to have been fished out. In one instance a party who held license for four pound-nets did not realize enough to pay for it. He took up his nets in July and with a number of others went out to fish with gill-nets in Lake Huron."

"The large decrease in pickerel, sturgeon, pike, bass and maskinongé is due to the destruction of illegal trap-nets and seines. I destroyed forty-two of these nets this year. This alone, at one ton each, would cause a decrease in the catch. Seining is now one of the worst evils to contend with, and this season Indians and others were supplied with seines by unscrupulous dealers. At Wikwimikong, between 25 and 30 tons of whitefish were caught by means of seines in four days, and over two thirds of this amount were spoiled, as the men had to bring them 15 miles, and had no ice at this point in which to pack them. Seining for pickerel is also extensively carried on on the north shore of Georgian Bay during the close season. The fish are packed in ice and secreted until after the close-time is over." Many Indians have fished without licenses, a few days at a time with small nets. They are well aware that they are breaking the law and should in all cases be dealt with the same as white men.

"The towing of logs by American firms has been most injurious to the interest of the fishermen, and in some cases they have lost all of their nets, besides injury was done to the feeding and breeding grounds of the whitefish.

"Dealers and firms with United States capital are getting control of our fisheries to the exclusion of our own fishermen."

The Sawdust Act is being strictly enforced in this district, and the close seasons in this division, have been well observed. Fishermen agree that if fishery regulations had been observed more strictly heretofore, they would enjoy better fishing now. The yield of this division is valued at \$255,619., being a decrease of 20 per cent as compared with last year.

GEORGIAN BAY DIVISION.

Capt. A. M. MacGregor of the "Bayfield" and *Capt. E. Dunn* of the "Petrel" both complain of the difficulty there is in securing reliable statistical statements of the fisheries of Georgian Bay and Lake Huron where they were cruising at the end of the season. It was rather late when they began to collect information and many fishermen had left for other employment, hence the statements are not so complete as they might be.

The total catch of the Georgian Bay fisheries employing 18 tugs and 87 boats manned by 356 men using 773,500 fathoms of gill-nets, is only valued at \$344,740, being a decrease of 33 per cent below the yield of 1892. This large diminution is particularly noticeable in whitefish which shows a shortage of 50 per cent.

On this point, *Capt. MacGregor* remarks as follows:

"From personal experience of many years while carrying on the fishing business in this division and close observation the past three seasons, in the fishery protective service, all kinds of fish have materially declined. In *Lake Huron* and south side of Georgian Bay, whitefish and herring have decreased at least 75 per cent, salmon trout 25 per cent, and all other fish in proportion, and in a marked degree all kinds of fish are much smaller in size. This, no doubt, is owing to a reduction in the mesh of gill-nets, and more particularly to the introduction of pound, trap and hoop-nets and to the use of seines: these inshore appliances are very destructive to immature and all kinds of small fish. Many of the fish planted from the hatcheries are destroyed in this way.

' Whitefish were formerly very numerous at the Fishing Island; few are now caught in that locality, their principal spawning grounds are the North Channel and the north-east portion of Georgian Bay as far east as Bushby Island.

"Salmon-trout during the spawning season are very plentiful between Cape Hurd and Michel's Bay in Lake Huron, and spawn earlier in the vicinity of Fitzwilliam's Island than in any other place in the lake or Georgian Bay. The other localities they frequent more particularly are the vicinity of Cape Croker, Vail's Point, the shoals of Collingwood, and all the rocky and stony shores of Lake Huron, Georgian Bay and the North Channel.

"Herring principally spawn between Chief's Point and Loyal Island in Lake Huron, at the mouth of French River, Shawinigan Bay, and the bays around Moon River and Mashedash Bay, in the Georgian Bay.

"The formation of the North Channel and Georgian Bay, with their numberless islands, with deep water between, renders this locality peculiarly adapted for the propagation of all kinds of fish. From the manner fishing is now carried on, over fishing, carelessness, or indifference of fishermen with regard to the pollution of the feeding grounds by offal of course fish and by the sinking of bark from saw-logs, fishing will soon not be worth prosecuting, unless some drastic action be taken in the near future."

Capt. MacGregor also states that our fisheries of the great lakes are mostly controlled by foreigners, and indirectly the most of the plant and the price of the fish are regulated by them, to the detriment of the Canadian fishermen.

LAKE HURON (PROPER).

Overseer Chas. Briggs, of Paisley, who has charge of the coast from Cape Hurd to Southampton, returns a fair catch of salmon-trout, but made no report. The total catch of his district is made up at \$79,460.

Overseer Hugh McFayden who has charge of the four branches of the Saugeen River, reports that trout are not quite so plentiful nor so large in size as formerly. About 20,000 lbs. of that game fish were caught in these streams. There are so many camping parties that it is somewhat difficult to arrive at a definite estimate of their respective catches. Several fishways were swept away last spring, but have all been replaced again.

Overseer H. W. Ball reports an average catch of fish in the waters of his division. Where there was an increase, it is due to a larger number of boats and nets being employed, as was the case at Kincardine and Southampton. Early in the season this overseer notified all fishermen, with respect to the penalty for fishing without licenses. If there was a close season for herring it would lead, almost to the abolition of illegal fishing, as often fishing for herring is used as an excuse when the larger game is the real incentive. As a rule, November fishing does not pay in the majority of cases, illegal fishing is only ventured upon with old nets, which unfortunately may be shifted by storms and allowed to remain in the waters full of decayed fish to contaminate the vicinity.

The total value of this part of the division is reckoned at \$148,900.

Overseer H. B. Quarry reports that fish generally seem plentiful, but owing to rough weather the catch was not so large as it might have been. The augmentation of fish is ascribed to the planting of fry from the hatchery. Mr. Quarry also complains of the neglect of fishermen to give their real catch of fish. The fisheries in his district are valued at \$19,000.

Overseer J. C. Pollock reports fish plentiful, especially in St. Clair River, where the catch was not only better than usual but of a superior quality. This year, there was less traffic on the river owing to low freights, and fishing should have been prosecuted more advantageously. He thinks a larger number will apply for licenses next season. The value of the lake portion of his division is put down at \$11,482, and for St. Clair River at \$8,942.

LAKE ST. CLAIR DIVISION, INCLUDING DETROIT RIVER.

Overseer Joseph Boismier, who has now charge of most of Lake St. Clair, reports a considerable falling off in herring for which he can ascribe no reasonable cause. Pickerel are increasing, and he states that it is a pity to catch them so small, as he

has found them on markets where they hardly realized 2 cents per lb., while the larger fish brought 7 cents. Large quantities of sturgeon are caught by pound-net fishermen as well as with night-lines. Whitefish fishing showed improvement at Fighting Island as compared with last year. The whole yield of this district is only valued at about \$11,000.

THAMES RIVER.

No net fishing was allowed in that stream this year, but the overseers report quite a few bass captured with the hook and line or trawl.

LAKE ERIE—DIVISION.

(Total Value \$339,019—Decrease \$68,887.)

Overseer D. Girardin reports a very small catch of fish generally, herring especially shows a deficit of 50,000 lbs. as compared with last year, and the decrease of whitefish is as large in proportion. This, however, is attributed more to the stormy weather, experienced towards the end of the season, considerably damaging the nets &c., than to the actual scarcity of fish. The whole catch is valued at \$8,570 against \$14,790 in 1892.

Overseer Everett Wigle who has charge of the coast fronting on the county of Essex made no report, but returns a fair catch of fish valued at \$80,400.

Overseer Hy. Linley says that, notwithstanding the season was late in opening, the spring and summer fishing was very good. The run of herring was remarkably steady until August. Many fishermen did not start fishing till after the close season for pickerel was over. Whitefish seem plentiful, but the quantity taken is short of last year's catch by 30,000 lbs. Strict observance of the close seasons, aided by fry from the hatcheries, will soon result beneficially. Young whitefish and young sturgeon should not be taken. Whitefish and herring spawn about the same time. Several unlicensed nets were seized and the offenders fined; some nets owned by citizens of United States were also confiscated and destroyed. Stormy weather greatly interfered with the fall fishery operations which is probably the cause that the total yield falls short of the previous year, being valued at \$109,500 or \$14,000 of a decrease.

Overseer Wm. Freeland states that the spring fishing season began very favourably, large hauls of herring and pickerel being made, but the mighty blasts of October destroyed or injured the nets to such an extent that repairs were useless. The close seasons were well observed. The catch of this division is reckoned at \$83,530 a decrease of about \$13,000, when compared with the preceding season.

Overseer David Sharp also reports good fishing in the beginning of the season in fact better than the average for the last ten years. A large increase is reported in the catch of sturgeon. The gales in October were the strongest ever experienced, and destroyed more than half of the nets. Nets used for fishing under the ice were destroyed and the owner fined. The total yield is valued at \$31,400, a slight decrease from 1892.

LAKE ONTARIO DIVISION.

(Total Value of catch \$181,690—Decrease \$27,348.)

Overseer Fred Kerr states that herring is the principal kind of fish in this district, and fishermen seem indifferent to other species. There is a slight increase noted at the old fishing stations along the Lake Ontario coast. The cisco herring also gave signs of improvement. At Niagara, herring appeared in abundance but disappeared as suddenly as they appeared; at Beamsville, herring fishing without being large, was steady, giving the fishermen time to dispose of their fish at fair prices without glutting the market. At Burlington beach this industry was also improved, but herring seem to remain in deeper water than usual. In Lake Erie,

this fish did not appear to be more numerous than last year, but great hauls were made especially through the ice. They take the hook readily. This officer thinks that winter fishing should be encouraged as these fish are then in prime condition and meet with ready sale.

Salmon-trout also seemed more plentiful than usual in Lake Ontario especially at Grimsby and Winona, where some splendid specimens were captured, some were caught at Burlington Beach, which is quite a rare occurrence.

Whitefish are either scarce or fishermen care not to seek them, for very few are taken.

The catch of sturgeon was about the same as last year. At the mouth of the Niagara River, this fishing is wholly carried on with lines, all along the river to Queenston where they appear in vast numbers at different periods of the year. This season's fishing there did not seem to be so regular, owing to the waters becoming filthy and polluted by factory rubbish thrown in from the United States side of the river.

Coarse fish are as plentiful as ever, and good catches were affected at many places.

Mr. Kerr is of opinion that seining for coarsefish should not be prohibited, as otherwise these voracious species would rapidly increase to the detriment of the finer grades which are constantly drained by pound nets or gill nets. An abuse seems to exist in catching immense quantities of young fish of the best grades in our bays and rivers which are sold to anglers of Buffalo and Detroit as minnows.

No violations of the fishery laws are reported. The total catch of the Lake Ontario portion of his division is valued at \$34,300, a decrease of 24 per cent as compared with the yield of 1892.

Overseer Wm Sargent states that although ciscoes are steadily declining, more were caught this year than during 1892. Ciscoes seem to be replaced in these waters by a strange species of herring, more like the salt water fish in appearance and probably as good a fish as the ciscoe ever was. Trout are on the increase and those taken were of fine quality, some weighing as high as 20 lbs. The improvement in this kind of fish is attributed to the fry distributed from the hatchery. Bass are also increasing. There is a mill dam on the 16 Mile Creek unprovided with a fish pass, which prevents the fish from ascending. The yield of this division, mostly herring, is reckoned at \$28,000, being \$12,000 less than in 1892.

Overseer Chas. Gilchrist states that fish are not getting scarce either in Lake Ontario part or in Rice Lake. About 60 Indians are engaged fishing for bass and maskinonge. Only eleven permits were issued to foreigners for the privilege of angling in Rice Lake. The total yield amounts to \$17,300, an increase of 80 per cent over last years' which was considered a poor season.

Overseer Nelson Simmons reports angling and trawling on Trent River as better than he has ever seen it before. A party of four, coming from Toronto, caught 1200 lbs., of bass and maskinonge in two days. There is a dam still unprovided with a fish pass. The total value of fish is given at \$13,000.

Overseer Joseph Redmond Jr. reports a fair increase in the catch of salmon-trout and fishermen are in hopes of further improvement next season. The whitefish grounds on the Lake shore yielded much better than the Bay, as the fish were late coming in the latter place. Coarse fish were also plentiful and brought higher prices than formerly. In comparing the catch, it must be borne in mind that there were seventy-five hoop-nets less used in 1893 than in 1892. This officer seized for illegal fishing one seine, one hoop-net and 825 fathoms of gill-nets. The total yield of this district amounts to \$51,000 about the same as in 1891 but a slight decrease from last year.

Overseer W. P. Clarke, in charge of Bay of Quinté, says the catch of whitefish and herring was barely more than half of an average catch. The fish were of a larger size and brought better prices than last year. If the finer grades of fish are on the decline, coarse fish are increasing. Mr. Clark would like to see all nets marked so that the unlicensed ones should be easier detected. The total value is reckoned at \$13,500 a decrease of 50 per cent as compared with the yield of 1891.

Overseer E. H. Sills states that the yield of the fisheries in his district is about the same as last year. The season opened earlier than usual. The close seasons were well observed. Several attempts at poaching were frustrated in time by local guardians. The total value is given at about \$8,000.

Overseer R. R. Finkle also reports a light catch of whitefish and salmon-trout around Amherst Island. Fishermen ascribe this shortage to the fact that these fish have been frequenting the south shore of Lake Ontario, as the catch is much better on the United States side than ours. The whole yield is valued at \$5,250.

Overseer P. Kiel states that the fishery regulations are strictly observed. There is but little fishing carried on around Wolfe Island now, as most of the old fishermen have abandoned their grounds. The catch, consisting chiefly of coarse fish netted on the marshes, is only valued at \$650.

FRONTENAC, LEEDS AND LANARK DIVISION.

Overseer Thos. Merritt states that the fishing industry was not so vigorously prosecuted as it had been for the past two years, owing to the curtailing of licenses for the better protection of game fish. The lower grades of fish have increased considerably, to the detriment of the spawn and fry of the finer species. All infractions of the fishery laws detected were duly punished. There are no fish-ways in this district and none required. The yield did not reach \$2,000 in value.

Overseer N. Acton states that bass was plentiful in his district and if the catch was not larger it is because the number of tourists was smaller than usual.

Overseer Geo. Lake remarks that coarse fish were about as plentiful as during the previous year. The whole catch, about 30,000 pounds, is used for home consumption. Several parties were fined for violation of the close seasons. There is but one fish-way in his district, but he has ordered another at Parham.

Overseer R. A. Gilbert reports that as no netting is allowed in his district, trout is becoming very plentiful. Should this prohibition of nets be continued for a few years longer, these waters will afford most excellent sport to visitors and settlers with hook and line, sufficient to supply all local demands. He estimated the catch of trout at 15,700 lbs. The close season was well observed, though in one instance some hunters, whom he could not locate, attempted to defy the law but lost their nets in consequence.

Overseer H. R. Purcell states that sportsmen reported bass fishing as the best ever known. Trout and pickerel were also plentiful. With the exception of two parties convicted of illegal fishing and who were fined, the regulations were well adhered to. The fry put in some of these lake four years ago, are thriving well, and some good catches of fish were made.

Overseers Hicks, Boddy and Greer return about an average catch of fish for Charleston and Beverly Lakes.

GRENVILLE, DUNDAS, STORMONT AND GLENGARRY DIVISION

Overseers Mooney, Wallace and Poole return a much smaller catch than last year. The fish consisted chiefly of sturgeon, bass, pike and other coarse fish, valued at \$2,726. The number of tourists seems to have been considerably less owing to better attractions in other localities.

PRESCOTT, RUSSELL AND CARLETON DIVISION.

Overseers O. Miron, R. O. Campbell and M. Riddell return about the same quantity of fish as last year, mostly consisting of coarse fish and representing the small value of \$2,165.

RENFREW DIVISION.

Overseers Geo. and M. L. Russell, A. Acheson and W. Yuill, altogether return but 40,800 lbs. of fish, mostly coarse fish, with the exception of 500 lbs of bass. This catch is about the same as in 1892 and is valued at about \$2,000. The fishery laws are generally reported as being well observed.

PARRY SOUND AND MUSKOKA DIVISION.

Overseer Geo. R. Steele remarks that with one exception of with a net which he seized and destroyed without detecting the owner, the regulations were well observed. All the saw mills visited by this officer were faithfully complying with the Act.

Overseer J. G. Rumsey states that now, he counts upon the good will of the settlers, the fishery regulations are better observed, the practice of illegal netting and spearing is about stamped out. The fish-way built at Burk's Falls is working satisfactorily, and large catches of speckled trout are reported from the Maganettawan River. Saw-mills throughout this district are all provided with burners, hence there will be no more trouble from rubbish. Mr. Rumsey received complaints that the Muskoka River was being polluted by refuse from a large tannery, but upon investigation, he found the matter rested more with health officers than fishery overseers

LAKES SIMCOE AND COUCHICHING DIVISION.

Overseers L. S. Sanders and E. H. Cameron state that net fishing is not allowed, the lake having been set apart for the natural propagation of fish; however, angling for bass was much better than for the last few years. Herring were plentiful during spring and summer, but in the fall very few were caught.

Overseer Wm. McDermott states that the fishery laws were generally well observed in the inland waters of the county of Simcoe. It is true several complaints reached him, but with a single exception, there was not sufficient evidence to warrant a conviction. The presence of a couple of Dominion Police as special guardians sent to patrol the Holland River during the close time had a salutary effect, and he would not object to a repetition as this is the portion of his district where most illegal fishing is indulged in. Bass, pickerel and pike seem to be steadily increasing in these waters, but the same cannot be said of speckled-trout. The fish-ways in this district are all in good order, quite a number of the old structures have been replaced by new ones during the summer. The total yield is estimated at about \$8,500.

LAKE SCUGOG.

Overseer John Martin reports a catch of 200,000 lbs. of maskinonge and 150,000 lbs. of bass, besides coarse fish, in all representing a value of \$24,750. There were more people fishing than formerly, and fishing through the ice for bass or maskinonge gave some of them occasion to attempt snaring, but he has not been able to detect any.

PETERBOROUGH DIVISION.

Overseer Geo. W. Fitzgerald returns the yield of maskinonge at 50,000 lbs and bass at 160,000 lbs, in the inland waters under his charge. He remarks that these fish were more plentiful than during the previous year. Several parties were prosecuted for spearing and snaring fish and were duly fined: snaring is very difficult to detect. All the local guardians attended to their duties faithfully. The sawmill owners have kept the refuse of their mills fairly well out of the streams, only one infraction of this regulation being dealt with. Stony and other lakes contain a kind

of land locked salmon which will hardly take the fly and Mr. Fitzgerald would not object to allow *bona fide* residents to fish for them with nets during a short period of the fall. There are several dams still unprovided with fish-passes. Over a hundred foreign tourists visit these waters every summer.

WELLINGTON AND NEIGHBOURING COUNTIES.

Overseer Joseph Graham states that fish were about as plentiful as last year. Fishing for coarse fish through the ice where trout are to be found is very tempting and may be easily abused. There are several dams on Credit River unprovided with fishways.

Overseer David Coleman has charge of the waters of the County of Cardwell consisting of ponds and small streams, the principal of which are the Nottawasaga and Credit. These waters having a gravel bottom are admirably adapted for the spawning of speckled trout, which is extensively carried on here by private enterprise. One firm alone have already deposited one-quarter of a million fry in their waters and have made arrangements for an additional 150,000 to be placed this coming spring. There are two private Brook-trout hatcheries in this district supplying fry at reasonable prices. The greatest enemies of the trout are suckers and poachers during the close-time. The territory is so extensive that it is almost impossible for one party to do it justice without assistants.

ARIO.

Men employed, &c., with the Kinds and Quantities of Fish in the Province of the Year 1893.

KINDS OF FISH.										VALUE.	Number.
Whitefish, brls.	Whitefish, lbs.	Trout, lbs.	Trout, brls.	Herring, fresh.	Sturgeon, lbs.	Pickarel, lbs.	Pike, lbs.	Coarse, fish.	Home Consumption, lbs.		
265	309300	9750	.....	.....	8830	19620	9100	.....	10640	\$ cts. 30,674 00	
290	575000	310400	815	30000	20500	35000	.....	40000	50000	94,670 00	1
.....	10200	13000	.....	.....	.....	.....	.....	.....	.....	2,116 00	2
.....	64000	124000	.....	.....	.....	.....	.....	.....	.....	17,520 00	3
.....	.....	160000	.....	.....	.....	.....	.....	.....	.....	16,000 00	4
.....	.....	190000	.....	.....	.....	.....	.....	.....	.....	19,000 00	5
.....	102200	106400	.....	.....	.....	.....	.....	.....	.....	18,816 00	6
.....	36500	28000	.....	.....	.....	.....	.....	.....	.....	5,720 00	7
.....	24300	18000	.....	.....	13400	15000	450	.....	.....	5,320 50	8
.....	21000	8600	.....	.....	1500	1600	300	.....	.....	2,725 00	9
.....	7500	7500	.....	.....	.....	.....	.....	.....	.....	1,350 00	10
290	840700	965900	815	30000	35400	51600	750	40000	50000	.....
2900	67256	96590	8150	900	2124	2580	37	1200	1500	183,237 50	

Fishing Material, &c., in the Province of Ontario, &c.—Continued.

MATERIALS.		KINDS OF FISH.									
Pound Nets.		Whitefish, brls.	Whitefish, lbs.	Trout, lbs.	Sturgeon, lbs.	Bass, lbs.	Pickerel, lbs.	Pike, lbs.	Coarse fish, lbs.	VALUE.	Number.
No.	Value.										
	\$									\$ cts.	
			80000	1000					600	6,518 00	1
4	2000	25	41000	10000	1000		5000	3500	8000	5,255 00	2
3	1500	50	80000	10000			20000	20000	5000	10,050 00	3
2	1000		24100	12300	520		1120	100		3,250 20	4
4	2000		54430	24320	540		16310	3200	200	7,800 30	5
4	2000		20000	6000	20000	100	6000		300	3,715 00	6
3	1500		15000	4500	15000	75	4570		350	2,793 50	7
			70000	30000				200	40500	9,825 00	8
3	900		20000	40000	2000		2000		300	5,829 00	9
			15060	14570			140			2,668 80	10
3	1300		14000	18000	29300		36000		200	6,484 00	11
			2530	12500						1,452 40	12
4	1600		18540	10890	13400		5000			3,626 20	13
7	2100		27240	7930	4730		9630			3,737 50	14
5	1500		24170	457570						47,690 60	15
7	3500		37330	13680	5120		3330			4,828 10	16
			14000	2000					5000	1,470 00	17
10	2800		123200	40000	5522	1000	1000			14,297 32	18
			429260	50050	5000	360		13550	3010	40,435 20	19
			559600							44,768 00	20
			340000		300		4600	1010		27,498 50	21
			20340							1,627 20	22
60	23700	75	2029800	765310	102432	1535	114700	41560	63460		
		750	162,384	76,531	6,145	92	5,735	2,078	1,904	255,619 82	

Fishing Material, &c., in the Province of Ontario, &c.—Continued.

KINDS OF FISH.											VALUE.	Number.
Whitefish, lbs.	Whitefish, brls.	Trout, lbs.	Herring, brls.	Herring, fresh, lbs.	Sturgeon, lbs.	Maskinonge, lbs.	Bass, lbs.	Pickered, lbs.	Pike, lbs.	Coarse fish, lbs.	Home consumption, lbs.	
											\$ cts.	
26000		72200								23000	9,990 00	1
45000		93400								72600	15,118 00	2
104800		223500								56800	32,498 00	3
12300		14600								188000	8,084 00	4
21000		34000								1600	5,128 00	5
1662000		464000		4400	464000	2000	5000	182000	36000	12000	179,012 00	6
117000		174000						14000			27,460 00	7
21000		121500		4500							13,965 00	8
*												9
75100		320000								42100	39,271 00	10
16800		128700									14,214 00	11
1601000		1645900		8900	464000	2000	5000	196000	36000	398100	344,740 00	
105000		620000	2000				1000				79,460 00	1
		20000									2,000 00	2
38000		586000	300	10900			6000	10000	600	30000	68,680 00	3
5000		106000	280	8000			1500	2000	200	20000	14,860 00	4
40000		530000		24000	3000		14000	7000	400	60000	65,450 00	5
38000		89600		18740	60500		300	41730		18100	19,034 70	6
		15400	200	57200	67520			63680	1800		11,482 10	7
226000		1967000	2780	117970	131020		22800	124410	3000	128100	260,966 80	
1601000		1645900		8900	464000	2000	5000	196000	36000	398100	344,740 00	
2029800	75	765310			102432		1535	114700	41560	63460	255,619 82	
3856800	75	4378210	2780	126870	697452	2000	29335	435110	80560	589660	356500	
308544	750	437821	12510	3806	41847	120	1760	21555	4028	17690	10695	861,326 62

RETURN of the Number, Tonnage and Value of Vessels, Boats and

Number.	NAME OF DISTRICT.	VESSELS, TUGS AND BOATS EMPLOYED.						FISHING MATERIALS.				
		Vessels or Tugs.				Boats.		Gill Nets.		Seines.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Fathoms.	Value.
	<i>Lake St. Clair Division, including Detroit River.</i>			\$			\$			\$		\$
1	St. Clair River.....					15	250	25			370	775
2	St. Clair Lake.....					26	995	65			2850	2026
3	*Thames River.....											
4	<i>Detroit River, including Bois Blanc and Fighting Island.</i>					10	455	53			1800	1100
	Totals.....					51	1700	143			5020	3901
	Value..... \$											
	<i>Lake Erie Division.</i>											
1	Pelee Island.....					11	1090	25				
2	Coast fronting on Co. of Essex.....	2	106	11500	11	56	4610	80				
3	Coast fronting on Co. of Kent.....	1	198	18000	10	44	3800	61	860	180	750	300
	Coast fronting on Co. of Elgin—											
4	New Glasgow.....					5	495	12	300	100		
5	Eagle.....					5	650	9				
6	Tyrconnel.....					1	60	3				
7	Port Stanley.....	2	22	7000	11	10	1175	17				
8	Port Bruce.....	2	20	4700	6	5	800	9			300	200
9	Port Burwell.....	3	23	6000	8	5	400	13	1000	300		
10	Houghton to Rainham.....	4	30	6000	6	48	3000	124	8000	1200	4490	1850
11	Long Point Island.....	2	40	4000	8	15	1500	28			1455	700
12	Cayuga to Moulton Bay.....	3	30	850	8	2	25	7	5050	2600	100	125
13	Grand River.....					17	195	19			190	345
14	Low Banks.....					7	175	16	400	100	500	350
15	Port Colburne.....					5	125	5	500	125		
16	Ridgeway to Fort Erie.....	1		3000	3	13	615	20	5150	700	650	350
	Totals.....	20	469	61050	71	249	18715	448	21260	5305	8435	4220
	Value..... \$											

* Angling with hooks and lines.

Fishing Material, &c., in the Province of Ontario, &c.—Continued.

Pound Net.		KINDS OF FISH.									VALUE.	
Number.	Value.	Whitefish, lbs.	Herring, fresh, lbs.	Eels, lbs.	Sturgeon, lbs.	Maskinonge, lbs.	Bass, lbs.	Pickarel, lbs.	Pike lbs.	Coarse fish, lbs.		Number.
	\$										\$ cts.	
3	750	500	18000 400		7900 45500	1000	12000 12500 15000	132890 30700	2150 8050 3200	15200 64100 10000	8,942 00 7,452 50 1,360 00	1 2 3
		25000			150	220	1800	420	46500		3,528 20	4
3	750	25500	18400		53550	1000	39720	165390	13820	135800		
		2040	552		3213	60	2383	8269	691	4074	21,282 70	
28	5800	11900	113200		21850	9750	19500			45000	8,569 00	1
42	24080	85460	1101800		127800	21320	72950	278830		466000	80,407 00	2
42	17440	45260	2784104		52070	2000	163000	93000		211200	109,524 12	3
9	3300	12600	281000		18000	300	74900	6400			14,601 00	4
8	2400	4500	300000		6900		27500			3700	11,260 00	5
2	300	800	30000		600		4000			1100	1,233 00	6
17	6650	28300	590000		18500		200000			11200	31,410 00	7
10	4000	8410	90170		10400	300	145520	800		29200	12,211 90	8
9	2700	10400	82820		11700	166	151850	3730		33680	12,817 96	9
23	5900	31250	410540		48560	600	182040	18520		109100	31,426 80	10
9	2700	6760	113900		20860	1580	12340	42500	21745	110000	12,556 85	11
		1800	85000		1600	1400	29800	800		16000	4,884 00	12
	†				1300	800	3025	8600	5000	47150	2,402 00	13
		6900	17000	1000	400		3000	715	1200	10300	1,730 75	14
			4200		350			1700		6000	412 00	15
3	2000	1900	39300		15800			6000	2000	29800	3,573 00	16
202	76970	256240	6043034	1000	356690	2980	59601	1130575	432025	1129430		
		20499	181292	60	21401	179	3576	56529	21601	33883	339,019 38	

† And angling.

RETURN of the Number and Value of Vessels, Boats and

Number.	NAME OF DISTRICT.	VESSELS, TUGS AND BOATS EMPLOYED.						FISHING MATERIALS.								
		Vessels or Tugs.				Boats.		Gill Nets.		Seines.		Pound Nets.		Hoop Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.	Fathoms.	Value.	Number.	Value.	Number.	Value.
	<i>Lake Ontario Division, including Niagara River and other tributaries.</i>			\$			\$			\$		\$		\$		\$
1	Queenstown					4	222	5					*3	630		
2	Niagara					7	585	14	7100	1350						
3	Beamsville					9	770	19	8800	925	150	100				
4	Port Dalhousie	1	8	1200	3	6	525	10	7000	1450	150	100				
5	Burlington Beach					16	1415	27	16500	2020	550	350				
6	Angling or trolling in the above districts															
7	Bronte					15	2100	45	44800	4600						
8	Mimico to Port Union					9	600	16	5800	900	450	300				
9	Pickering Harbour					6	340	11	1800	625						
10	Bowmanville					2	20	2			100	80				
11	Cobourg					4	220	8	2750	175	50	40				
12	Lake Port					1	100	2	1000	200						
13	Brighton					12	950	19	9250	345	200	300			22	500
14	Rice Lake								About 60 Indians trolling							
15	Trent River								Angling and trolling.							
	<i>Prince Edward County.</i>															
16	Wellington Beach	4	175	9000	20	75	2000	200	7000	1300	700	1300	. . . . .	. . . . .	14	280
	Weller's Beach															
	Smith's Bay															
17	Bay of Quinté					52	1300	143	3650	465	2700	1670	. . . . .	. . . . .	67	1415
18	Lake coast fronting on Lennox					27	424	42	2860	510	200	150	. . . . .	. . . . .	38	960
19	Amherst Island					23	350	25	6325	675						
20	Wolfe Island					11	360	17	1675	200					10	165
	Totals	5	183	10200	23	279	10281	665	126310	15740	5250	4390	3	630	151	3320
	Value, \$.															

*Machines.

Fishing Material, &c., in the Province of Ontario, &c.—Continued.

KINDS OF FISH.											VALUE.	Number.
Whitefish, lbs.	Trout, lbs.	Herring, brls.	Herring, fresh, lbs.	Eels, lbs.	Sturgeon, lbs.	Maskinongé, lbs.	Bas, lbs.	Pickered, lbs.	Pike, lbs.	Coarse fish, lbs.		
											% cts.	
			40800	200	600		1400	1430		2500	1,502 50	1
600	300		92700	50	26100		1400	71430		20500	8,698 50	2
500	14000		14300		800					17500	2,442 00	3
300			126000	1000	1200		1200	6200	800	13900	4,775 00	4
1000	4000		193000	250					2700	3700	6,531 00	5
							60000	65000	70000		10,350 00	6
200	4000		898000	300			700		1000	18000	28,006 00	7
9500	2000		204600	350			100		310	106800	10,344 50	8
			2300								69 00	9
										2000	60 00	10
400	5300		15000								1,012 00	11
200	4000										416 00	12
930	16100		3000	7000					37600	48000	5,514 40	13
						72000	100000				10,320 00	14
	3000			10000	2000	60000	55000	35000	40000	50000	13,170 00	15
240000	180000		120000	40000	4000	3000		41000	80000	50000	51,170 00	16
36840		160	35600	5130	930	1165	3075	18900	40340	172150	13,479 70	17
34000			20000	8800				21700	20800	65000	7,923 00	18
45000	10000			1000			4500	4500	2000		5,255 00	19
100	20		300	2700	150		200	200	3700	8500	652 00	20
369570	242720	160	1765600	75780	36780	136165	227575	265360	299250	578550		
29566	24272	720	52968	4547	2207	8170	13654	13268	14962	17356	181,690 60	

RETURN of the Number and Value of Vessels, Boats and

Number.	NAME OF DISTRICT.	VESSELS, TUGS AND BOATS, EMPLOYED.						FISHING MATERIALS.				
		Vessels or Tugs.				Boats.		Gill Nets.		Hoop Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Fathoms.	Value.	No.	Value.	
	<i>Frontenac, Leeds and Lanark.</i>			¢		¢		¢		¢		
1	Howe Island.....					4	50	4	1,100	105	4	85
2	Kingston, Storrington and Pittsburg.....					10	250	16	1,581	230	13	130
3	Gananoque.....							3			3	30
4	Frontenac County.....											
5	Leeds and Lanark, including Charleston and Beverly Lakes					8	140	15			29	590
	Totals					22	440	38	2,681	335	49	835
1	<i>St. Lawrence River</i> , fronting on the coun- ties of Grenville, Dundas, Stormont and Glengary											
2	<i>Ottawa River</i> , fronting on counties of Prescott, Russell and Carleton.....											
3	<i>Ottawa River</i> , fronting on the county of Renfrew											
4	<i>Lake Nipissing Division</i>											
5	<i>Parry Sound and Muskoka Divisions</i>											
6	<i>Lake Simcoe Division</i>											
7	<i>Lake and River Scugog</i>											
8	Hastings, Peterboro' and Victoria coun- ties, including part of Otonabee River..											
9	Wellington and neighbouring counties, in- cluding Credit River.....											

* Estimated.

Fishing Material, &c., in the Province of Ontario, &c.—Continued.

KINDS OF FISH.										VALUE.		Number.
Whitefish, lbs.	Trout, lbs.	Herring, fresh, lbs.	Eels, lbs.	Sturgeon, lbs.	Maskinongé, lbs.	Bass, lbs.	Pickeral, lbs.	Pike, lbs.	Coarse Fish, lbs.	\$	cts.	
			2,000		1,400			4,260	4,200	543	00	1
								12,500	44,200	1,951	00	2
			1,000	2,500	1,000	3,000	1,000	3,500	18,000	1,215	00	3
3,000	23,200	10,000	1,000			21,400	3,700	4,800	4,400	4,761	00	4
2,200	3,500		1,700			15,800		9,500	57,000	3,761	00	5
5,200	26,700	10,000	5,700	2,500	2,400	40,200	4,700	34,560	127,800	12,231	00	
			2,500	16,700	1,350	9,300	700	10,500	12,500	2,726	00	1
			1,540	475	2,600	4,500	4,700	9,550	30,200	2,165	40	2
	600	200	2,000	4,200	1,900	5,000	4,200	11,200	11,450	1,965	50	3
					5,000	2,500		12,000		*1,050	00	4
3,500	28,000				3,600	15,550	20,600	5,500	39,000	6,704	00	5
	20,000			25,000		35,000	7,000	40,000	20,000	8,550	00	6
			2,500		200,000	150,000			120,000	24,750	00	7
200	15,800	500	5,100		94,000	115,200			68,300	16,518	00	8
	7,000		500			1,000			9,000	1,060	00	9

RECAPITULATION of the Number and Value of Tugs, Boats and Fishing Material, &c.—Province of Ontario—Concluded.

Number.	NAME OF STATION.	KINDS OF FISH.										Coarse Fish, lbs.	Home Consumption, lbs.	VALUE.	Number.
		Whitefish, barrels.	Whitefish, lbs.	Trout, lbs.	Trout, barrels.	Herring, barrels.	Herring, fresh, lbs.	Eels, lbs.	Sturgeon, lbs.	Maskegon, lbs.	Bass, lbs.	Pickarel, lbs.	Pike, lbs.		
1	Lake of the Woods.	265	309300	9750	815	2780	30000	8830	35400	2000	23835	19620	9100	30,654 00	1
2	Lake Superior.	290	840700	965900	815	2780	120870	35400	697452	2000	23835	51600	750	183,237 50	2
3	Lake Huron, including Georgian Bay	75	3886800	4378210	815	2780	120870	35400	697452	2000	23835	435110	80560	861,326 62	3
4	Lake St. Clair.	25500	25500	25500	25500	25500	18400	1000	53550	1000	39720	165390	13820	21,282 70	4
5	Lake Erie.	256240	309570	242720	100	1765600	6043034	1000	356890	2980	59601	1130575	432025	339,019 38	5
6	Lake Ontario.	5206	5206	26700	100	10000	10000	5700	36780	36165	227575	265360	299250	181,690 60	6
7	Frontenac, Leeds and Lanark counties.	5206	5206	26700	100	10000	10000	5700	2500	2400	40200	4700	34560	12,231 00	7
8	Greenville, Dundas and Stormont counties.	5206	5206	26700	100	10000	10000	5700	16700	1350	9300	700	10500	2,726 00	8
9	Prescott, Russell and Carleton do	5206	5206	26700	100	10000	10000	5700	475	2600	4500	4700	9550	2,165 50	9
10	Renfrew county.	5206	5206	26700	100	10000	10000	5700	4200	1900	5000	4200	11200	1,965 50	10
11	Lake Nipissing.	5206	5206	26700	100	10000	10000	5700	5000	5000	2500	5000	12000	1,050 00	11
12	Parry Sound and Muskoka.	3500	3500	28000	20000	20000	20000	25000	25000	3600	15550	20400	5500	6,704 00	12
13	Lake Simcoe Division.	3500	3500	28000	20000	20000	20000	25000	25000	3600	15550	20400	5500	8,550 00	13
14	Lake and River Seagow.	200	200	15800	7000	7000	7000	2500	16100	150000	150000	7000	40000	24,750 00	14
15	Hastings, Peterborough and Victoria counties.	200	200	15800	7000	7000	7000	2500	16100	150000	150000	7000	40000	16,518 00	15
16	Wellington and neighbouring counties.	200	200	15800	7000	7000	7000	2500	16100	150000	150000	7000	40000	1,660 00	16
	Totals.	630	5667010	56394680	815	2940	7994604	96620	1237577	452995	734481	2106555	958815	1,694,930 70	

RECAPITULATION

Of the Yield and Value of the Fisheries of the Province of Ontario, for the year 1893.

Kinds of Fish.		Quantity.	Prices.	Value.
			\$ cts.	\$ cts.
Whitefish.....	Brls.	630	10 00	6,300 00
".....	Lbs.	5,667,010	0 08	453,360 80
Trout.....	Brls.	815	10 00	8,150 00
".....	Lbs.	5,604,680	0 10	560,468 00
Herring.....	Brls.	2,940	4 50	13,230 00
".....	Lbs.	7,994,604	0 03	239,838 12
Eels.....	"	96,620	0 06	5,797 20
Sturgeon.....	"	1,237,577	0 06	74,254 62
Maskinongé.....	"	452,995	0 06	27,179 70
Bass.....	"	734,481	0 06	44,068 86
Pickarel.....	"	2,109,555	0 05	105,477 75
Pike.....	"	958,815	0 05	47,940 75
Coarse fish.....	"	2,911,690	0 03	87,350 70
Home consumption.....	"	417,140	0 03	12,514 20
Total for 1893.....			.....	1,694,930 70
" 1892.....				2,042,198 53
Decrease.....				347,267 83

STATEMENT

Showing the Number of Vessels, Tugs, Boats, &c., in Ontario, for the year 1893.

76 tugs or vessels (tonnage 1,734).....	\$ cts.
1,012 boats.....	197,650 00
1,718,726 fathoms of gill net.....	92,046 00
19,995 " seines.....	240,080 00
340 pound nets.....	14,641 00
200 hoop nets.....	115,370 00
Total value.....	4,155 00
	663,942 00

Number of men employed in the Fisheries of Ontario, 1893:—

In tugs or vessels.....	375
boats.....	2,254
Total.....	2,629

APPENDIX No. 13.

FISH BREEDING.

REPORT OF MR. SAMUEL WILMOT, SUPERINTENDENT GENERAL OF
FISH CULTURE FOR THE DOMINION OF CANADA, FOR THE YEAR
1893.

The Honourable SIR CHARLES HIBBERT TUPPER,
Minister of Marine and Fisheries,
Ottawa.

A full statement of all particulars relating to the operations at the several fish hatcheries in the Dominion of Canada will be embodied in this report, together with details of the work performed at the several individual fish hatcheries, now fifteen in number, located at various points in the several provinces, from the Atlantic to the Pacific Ocean.

The information submitted in this report, supplemented by the individual reports from the several officers in charge of the hatcheries, will enable the Department of Marine and Fisheries, and the public generally to form a proper estimate as to the quantities of young fish of various kinds which were turned out of each hatchery during the spring and summer of the past year.

GROSS OUT-PUT OF FRY, 1893.

The number and species of fry, bred, and distributed amounts to nearly double that of the preceding year of 1892 which all told was (134,908,000) one hundred and thirty-four million, nine hundred and eight thousand, whilst, for the present year of 1893, there were (258,314,000) two hundred and fifty-eight million three hundred and fourteen thousand fry, of the most valuable commercial fishes of the country, successfully planted in many of the rivers and lakes in the Atlantic provinces, and in British Columbia, and also in the great inland lakes of Ontario.

NEW HATCHERY IN MANITOBA.

During the past year a new hatchery was erected at Selkirk, on the Red River, in Manitoba, which is intended more particularly for the propagation of the famous whitefish of Lake Winnipeg. The interior arrangements are such, however, as to be adapted for the breeding of salmon trout, and such other fishes as may be required for the waters of Manitoba and the North-west Territories.

The building is a very extensive and commodious one, probably the largest fish hatchery yet built in the Dominion:—The machinery and apparatus are driven by steam, with a powerful pump which draws the supply of water from the Red River, and propels it through the numerous automatic glass incubators, and hatching troughs placed throughout the hatching room.

This nursery was only completed just in time to receive its first supply of White fish eggs in November last: the particulars connected with the starting of this hatchery, were somewhat difficult to overcome, yet the quantity of eggs collected and placed in the building amounted to upwards of (21,000,000) twenty-one millions. From latest accounts these eggs were progressing satisfactorily, and every

reliance may be placed upon having a large yield of young fish from them next spring. And on this account no exhibit of fry can be given from the Selkirk nursery until 1894.

The general progress of the work done, and the gross out-put of fry from the several fish hatcheries in the Dominion during the past season are of a very satisfactory character, as will be shown by the accompanying schedules, showing a grand total of 258,314,000 young fish, which were bred, and distributed in the waters of Canada, during 1893.

MORE HATCHERIES WANTED.

The generally reported decline in the fisheries, more especially in the great Lake regions of the interior, brought about by excessive fishing to meet the increasing demands for fish food for the Canadian, and American markets, would appear to call forth additional means for re-stocking and maintaining these fisheries; and the impression prevails almost universally, that the artificial methods of propagation will materially aid in bringing about this desirable improvement. The numerous applications also which have been received from public corporations and individuals for additional hatcheries to be built at various points, all run in the same line as evidences of the popular feeling which exists for increasing the present number of fish cultural institutions throughout the country, from which the annual out-put of young fish might be largely augmented, and at the same time give increased impetus to the fishing industries of the country, which render many advantages alike to the fisherman, and the public generally.

REPORTS AND OPINIONS OF OVERSEERS.

Overseer Williston says—

"The season just passed has been one bearing a bountiful harvest for the fishermen, salmon were unusually plentiful, and I ascribe the great increase to special guardians on the spawning grounds. The salmon were unusually plentiful in Bay du Vin and Black River."

Overseer Pat Hogan says—

A large catch of salmon, which is the principal fishery in his district. Believes the great increase of salmon due to present mode of protection, &c., &c.

Overseer Abbott says—

"The largest catch of salmon for at least twenty years."

Overseer Richards says—

"Fishing in this district fair—salmon exceedingly abundant."

NEW BRUNSWICK.

Overseer Verge says, "The weather during the month of June being extremely warm and dry, kept salmon in the deep water and later on they reached the rivers in much greater numbers than in preceding years."

Overseer Hickson says, "Salmon fishing all along the coast this season was better than for many years before. The anglers report good sport on the river this season *

* * There were more salmon on the Nipissiguit this fall than for a good many years."

Overseer Theriault says, "Salmon a good increase over last year."

Overseer Robichaud says, "Salmon has exceeded the record for past twenty years."

Overseer Goodwin says, "A larger increase in take of salmon by shad fishermen which he believes is partly attributable to fry placed in north lakes at head of Sackville River some years ago and strongly urges that more fry be put there next and succeeding years—believes that Tignish and Port Elgin rivers should be stocked."

SCHEDULE SHOWING DISTRIBUTION OF FRY.

The following table will show the out-put of fry of the various species during 1893.

Atlantic Salmon (<i>Salmo Salar</i>)	5,513,000
Pacific Salmon Sockeyes (<i>Naka</i>).....	5,764,000
Salmon Trout, Great Lakes, (<i>Naymacush</i>).....	6,652,000
Speckled Trout, of the streams, (<i>Fontinalis</i>).....	425,000
Whitefish, Great Lakes, (<i>Coregoni</i>).....	86,360,000
Lobster (<i>Homarus</i>)....	153,600,000
Grand total, 1893.....	258,314,000

The following schedule will show in separate columns the number and name of each hatchery; the quantities of fry, and semi-hatched eggs put out from the respective hatchery with a description, also of the species so put out during the season of 1893.

THE particular distribution of Fry from the several Hatcheries, in 1893, is shown in the following table.

No.	Name of Hatchery.	Number of Fry turned out.	Number of Semi-hatched eggs given to other Hatcheries.	Description of Fish.
1	Fraser River, B.C.....	5,674,000		Sockeye salmon.
2	Sydney, N.S.	Not working in 1893.		
3	Bedford, N.S.	320,000		Atlantic salmon.
	do	160,000		Salmon trout.
	do	2,700,000		Whitefish.
4	Dunk River, P.E.I.....	Destroyed by fire.		
5	St. John River, N.B.	365,000		Atlantic salmon.
	do	2,600,000		Whitefish.
	do	294,000		Salmon trout.
	do	40,000		Speckled trout.
6	Miramichi, N.B.....	975,000	300,000	Atlantic salmon.
7	Restigouche, P.Q.....	883,000	200,000	do
8	Gaspé, P.Q.	910,000		do
9	Tadousac, P.Q.....	2,060,000		do
10	Magog, P.Q.....	1,200,000		Salmon trout.
	do	2,400,000		Whitefish.
11	Nescastle, Ont.	2,800,000		do
	do	385,000	45,000	Speckled trout.
	do	4,150,000	3,600,000	Salmon trout.
	do	2,500,000		Whitefish.
12	Sandwich, Ont.	68,000,000	17,000,000	do
13	Ottawa, Ont.....	848,000		Salmon trout.
	do	5,360,000		Whitefish.
14	Bay View, N.S.....	153,600,000		Lobsters.
15	Selkirk, Man.....	1st year—no fry till 1894.		
	Totals.....	258,314,000	21,145,000	

DESCRIPTIVE ACCOUNT OF HATCHERIES.

A brief descriptive account as taken from official reports is here given of the several fish hatcheries in the Dominion, with regard to location and capacity for work; also showing the output of young fish, and the numbers of eggs collected at each nursery during 1893.

1. FRASER RIVER HATCHERY, B.C.

This hatchery is built upon the Fraser River, some two miles above New Westminster. It has a hatching capacity of some ten million of salmon eggs, which have been hitherto wholly of the "Sockeye" species. The supply of water is conveyed in open troughs from a small running stream into the building and into the several hatching troughs. The supplies of eggs are collected from the parent fish netted in a small branch of the Harrison River some forty miles above the hatchery. It has been in contemplation to build another hatchery a greater distance up the Fraser. The selection has not yet been made. A generally prevailing opinion is that the successful operations in rearing fry at the Fraser River hatchery largely accounts for the extremely successful catches of salmon on the Fraser River during the present and some former seasons.

The crop of fry, bred in 1893 and distributed in the tributary waters of the Fraser River, numbered 5,764,000; and the quantity of "Sockeye" eggs collected and placed in the hatchery in October, 1893, amounted to 6,880,000. The latest reports concerning these eggs are of the most favourable character.

2. SYDNEY HATCHERY, N. S.

This nursery was not stocked with eggs during the season of 1892-93. Arrangements are now made to stock it with 300,000 salmon eggs from the Miramichi hatchery, N. B., so that an output of salmon fry will be made from the Sydney nursery in the spring of 1894.

3. BEDFORD HATCHERY, N. S.

This hatchery is situated on the Sackville river immediately alongside the Intercolonial Railway near the town of Bedford. Its water supply is obtained from the Sackville river, by an underground pipe into the hatchery. The supplies of salmon eggs up to 1891 were got from certain rivers in Nova Scotia. In 1891 efforts were made to get parent salmon in the rivers entering into Merigomish Bay—where only a few were taken; they gave 600,000 eggs. In 1892 no parent salmon were obtained for the Bedford hatchery, but a supply of 350,000 eggs were transferred to it from the Miramichi nursery. During the past season of 1893, 54 salmon were netted in the rivers of the Merigomish Bay; 35 were females and gave 300,000 eggs, which are reported as doing well.

There were distributed from this hatchery during the season of 1893, from the eggs of 1892, 320,000 salmon fry; and also 2,860,000 fry of the salmon-trout and whitefish species, transferred from the Ontario hatchery.

There were collected for this hatchery in November last 300,000 salmon eggs from Merigomish Bay, and 300,000 semi-hatched salmon ova will be transferred to it from the Restigouche hatchery,—and in addition also 2,500,000 eyed eggs of salmon-trout and whitefish from the Ontario hatchery.

4. DUNK RIVER HATCHERY, P.E.I.

Fish cultural operations in Prince Edward Island are for the present suspended, the hatchery having been destroyed by fire.

5. ST. JOHN RIVER HATCHERY, N. B.

The work at the St. John River hatchery is producing good fruits, as shown by the report of the officer in charge, who states "That the general opinion is that the artificially hatched fry put into the streams has increased the supply of fish in waters where planted. In some lakes white fish and salmon trout are now found in which they were not previously known; and applications are being numerously made to stock the waters more largely than before."

The salmon are surprisingly increased in the upper parts of the River St. John and its tributaries; particular mention is made regarding the Tobique river where the angling lessees have made most satisfactory scores; two cases are mentioned as coming within the knowledge of this officer, when 27 and 37 salmon were respectively taken in a few days' fishing. Taking salmon with the fly in the Tobique River was not known until after it was stocked with Restigouche river fry, hatched in the St. John hatchery. Some of the fish taken have scored 27 pounds.

6. MIRAMICHI HATCHERY, N. B.

This institution shows continued success from the supplies of young salmon which have been turned out from it into the waters of the Miramichi River, and its numerous tributaries. With the same care and management which have characterized this hatchery in past years, the beneficial results already experienced by the fishermen will undoubtedly be largely increased in the future. This institution enjoys the approval and sanction of the public generally.

The past season's commercial catch of salmon has been the best for years, and the fishermen are now willing to concede this improvement as being largely due to the work at this hatchery. This, combined with efficient guardianship, must undoubtedly sustain the great resources which the Miramichi River and its estuary fisheries are capable of producing. There were 1,275,000 salmon fry bred in this nursery last season; they were planted in the principal branches of the Miramichi River in a healthy condition, and during the past autumn 1,575,000 eggs were laid down in this hatchery and are now undergoing incubation.

7. RESTIGOUCHE HATCHERY, QUE.

The prosperous condition of the salmon fisheries connected with the Restigouche river give evidence of the benefits which have resulted from the operations in artificial salmon culture carried on at the Restigouche hatchery for some years past. The officer in charge gives it as the unanimous verdict of the boatmen and guardians on the river that the parent salmon were never more plentiful on their spawning grounds up river than they were during last fall.

An interesting experiment is related in connection with this establishment regarding the growth and preservation of artificially bred fish as against the opinion of some persons skeptically inclined, who say that the nursery bred fry are all destroyed by trout and other predaceous fishes when turned out from the hatcheries. A small lake was chosen which was largely inhabited with trout and other fish. In it were planted a number of small salmon fry hatched in the Restigouche nursery. The fry planting took place some four years ago, and during the past summer a large number of young salmon of the size of parrs and smolts, the latter running up to a pound weight, were caught in this lake by anglers; and large numbers of those young salmon were also to be seen constantly leaping throughout the surface of the lake. This lake is wholly land-locked from the waters of the Restigouche River and Bay des Chaleurs, and is located on a mountain many hundreds of feet above the level of these waters. This is but one evidence, and a positive one too, amongst the many others that might be given to dispel the fallacy which prejudiced minds assert against the after life of young fish turned out from the Government hatcheries into the waters of the country.

The number of salmon fry distributed from this Restigouche hatchery during the past spring of 1893 amounted to 1,083,000, and the quantity of eggs laid down in November last was 1,430,000.

8. GASPÉ HATCHERY, QUE.

This institution is not built upon the same enlarged scale as some of the others. The work performed, however, has proved to be of a successful character for supplying the salmon fisheries of the Gaspé basin, and the rivers emptying into it, namely, the Dartmouth, York and St. John. An evidence of this is shown from the successful scores made by the anglers, particularly on the St. John river, where upwards of 100 salmon were taken by the lessees with the fly. Increased catches by anglers on the fluvial parts of rivers must show correspondingly an increase of fish in the estuary and tidal fisheries.

The quantity of fry put out of this hatchery in the spring of the past year amounted to 655,000; and the number of eggs collected in the fall of 1893 was 910,000.

9. TADOUSAC HATCHERY, QUE.

The report from this institution expresses the opinion generally held by the fishermen, that the hatchery has maintained the steady catch of salmon which has been experienced for some year past; evidences are also given of its effective work by the appearance of great numbers of young salmon that are to be seen leaping in the small lakes where they had been planted, and where the parent salmon could not get to, on account of natural barriers. These young salmon run from eight to twelve inches in length before leaving the lakes for the sea.

An auxiliary hatchery is recommended to be built in the vicinity of Chicoutimi, in which the usual supply of fry for the upper waters of the Saguenay could be hatched, and distributed much more cheaply and safely than by the present system of transporting the fry from the mouth of the river at Tadoussac at the expense of tug hire to the far up portions of the Saguenay, when during their transport considerable losses of the young fish are experienced.

The number of young salmon distributed from this hatchery last spring was 2,060,000; they were put in the tributaries of the Saguenay, and in several small lakes which have been found to be well adapted nurseries for their growth. The quantity of eggs collected and placed in the hatchery in November last was 2,094,200; they are progressing satisfactorily.

10. MAGOG HATCHERY, QUE.

A marked improvement is reported to have taken place in the waters of the district in the neighbourhood of this hatchery. The waters, however, require more efficient guardianship as well as larger supplies of fry to place them in the position they held years ago.

The supply of eggs for this hatchery are obtained from the Newcastle and Sandwich nurseries. The fry planted from the Magog institution in 1893 numbered 3,600,000 of white-fish and salmon-trout. The quantity of eggs proposed to be transferred to the hatchery for the coming season will be 3,000,000.

11. NEWCASTLE HATCHERY, ONT.

At this place artificial fish culture was originated in Canada, and it is the locality also where the first public governmental fish cultural works were established on this continent.

This institution commenced with the raising of salmon. It is now wholly used for the production of the principal commercial fishers indigenous to the great inland lakes of Ontario, such as salmon-trout and whitefish, &c.

The supplies of salmon-trout eggs are obtained at Wiarton on the Georgian Bay, where the officers connected with the hatchery employ their own nets and fishing gear for capturing and impounding the parent fish until ripe for manipulation; after which the fish are liberated again alive. The eggs are then conveyed to the Newcastle nursery, where after becoming semi-hatched, the quantities required for the eastern province hatcheries are shipped by railway express, generally in the months of February or March. The water for the hatching purposes is taken from a large pond formed upon an ever-flowing stream which empties into Lake Ontario. The quotas of semi-hatched eggs transferred to the eastern hatcheries in 1893 amounted to 3,645,000, and the gross output was 9,835,000. Of these upwards of 6,000,000 were distributed in many of the lakes and other waters of Ontario. The quantity of eggs collected during the autumn of 1893 and put in the hatchery troughs in this nursery was 9,000,000.

12. SANDWICH HATCHERY, ONT.

This hatchery is devoted now almost exclusively to the rearing of whitefish; but pickerel (*doré*) were formerly hatched here in considerable numbers; automatic glass incubators are used here exclusively, as they are best adapted for hatching all kinds of the smaller and semi-buoyant eggs. The establishment with all its breeding apparatus is worked by steam power, with duplex pumps which draw the supplies of water from the Detroit River into the upper part of the building, when by gravitation it runs downward into the incubators, percolating through the eggs until they are hatched into fry, when the little fish pass down into a large reservoir where they are kept safely until they are fit for distribution.

Many millions of these eggs in their semi-hatched stage have been transferred annually to the eastern nurseries; 17,000,000 were so shipped to the hatcheries in Quebec, Nova Scotia and New Brunswick during the season of 1893, and the total shipment of eggs and fry to all points from the Sandwich hatchery in the spring of 1893 amounted to 85,000,000.

There are two fishing stations worked by the officer in charge and his employees for catching the parent whitefish to supply eggs for the Sandwich establishment, namely: Bois Blanc Island, and Fighting Island fisheries, on the Detroit River; seines are used to catch the fish, when they are kept in cribs or crates, until ripe for spawning; after manipulation they are turned into the river again. The injured fish (if any) are given away, or sold at the end of the close season. There were collected in November last, in this way, about 95,000,000 of whitefish eggs, which were placed in the incubators and all are doing very well.

13. OTTAWA HATCHERY, ONT.

This hatchery is wholly supplied with impregnated fish eggs from the Newcastle and Sandwich hatcheries in Ontario, consisting of salmon-trout, speckled-trout, and whitefish ova. The fry from these, when hatched, are distributed throughout the waters of the Ottawa district and valley. This institution, from its location at the capital of the Dominion, is visited by the representatives in Parliament, and many other persons of note, from all parts, whose business and pleasure may call them to the city of Ottawa. In this way the Ottawa hatchery has become in a large degree an educator to the public generally on the practical working of fish cultural science in Canada. Its immediate connection in the same building with the Dominion fishery exhibits give additional interest in all fishing matters under the Department of Marine and Fisheries.

The number of fry of various kinds put out from the hatchery in the past season was 6,208,000. And the supply of eggs placed in the nursery to be hatched for next year's distribution will amount to 5,250,000.

14. BAY VIEW LOBSTER HATCHERY, N.S.

This establishment was built expressly to assist in keeping up the lobster industry, which had been showing marked signs of falling off in many parts of the lower

provinces. Its erection in 1891 introduced the first attempt in Canada for rearing lobsters by the artificial methods of propagation. The apparatus applied was wholly new, being the first of its kind ever used anywhere for lobster hatching. Automatic glass incubator jars specially designed for the purpose were set up, and have been used ever since, answering the purpose admirably in the hatching of upwards of 224,000,000 of young lobsters, which were planted in the waters of Northumberland Strait.

The establishment is propelled by steam power with a powerful pump which draws the salt water from the bay to the upper part of the building, and into a large wooden tank, from which it is run off by piping conveying the water into the incubator, and setting the eggs in motion. The eggs are taken from the ripe lobster as they are brought to the lobster factories in which the canning business is extensively carried on.

The output of young lobsters for the past season of 1893 was 153,600,000, they were reported to have been widely and safely distributed in many parts of the Northumberland Straits in a healthy and vigorous condition.

15. SELKIRK HATCHERY, MAN.

This is a newly built hatchery, put up during the past summer; it is located on the Red River at the town of Selkirk, intended more particularly for rearing white-fish, but so arranged, nevertheless, as to hatch salmon-trout and other fishes if necessary.

The water to feed the hatchery is driven by a powerful steam engine and duplex pump from the Red river to the upper storey of the building into a large reservoir, from which it flows downward through pipes into the glass incubators and through the eggs in them, until the fry are hatched:—

The white-fish eggs are collected in November by the officer in charge and his assistants, who net the parent fish at the head of Lake Winnipeg. After the collection and vitalization of the eggs they are conveyed up river some twenty miles, and put in the incubators at the hatchery, where they are cared for till the hatching time, which is generally in April and May following. To avoid the possibility of any injurious effects which might befall the eggs from the Red River water at the time of spring freshets, an artesian well is being sunk immediately alongside the hatchery, from which supplies of pure water will be drawn by the steam pump to be used in the place of the river water for the time being.

No output of fry can be shown for the present year, as the first supply of eggs for this institution were only collected in November last. They amounted to some 21,000,000, and are now undergoing incubation, they are reported to be in a healthy state.

EXTRACTS FROM FISHERY OFFICERS' REPORTS REGARDING INCREASED CATCHES OF SALMON AND OTHER FISH IN WATERS ADJACENT TO RIVERS WHERE FRY FROM THE HATCHERIES HAVE BEEN PLANTED.

FROM REPORT OF FISHERY INTELLIGENCE BUREAU, NOVA SCOTIA.

Hall's Harbour.—Salmon fishing at Hall's Harbour during the past few days has been the best ever known; remarkable, fine catches have been made. Last Friday one party took 152 fish, another 75, one of which weighed $42\frac{1}{2}$ pounds. On Sunday 91 fine large fish were taken in two tides; another catch amounted to 301 salmon; another catch of 96 on Saturday, also 117 on Sunday. One firm shipped from Kentville, on ice, to Boston, 1,075 lbs. In all about 2,800 lbs. of fresh salmon were shipped to Boston on Saturday. The total catch of salmon on Sunday and Monday aggregated five tons.

La Have.—Salmon were reported more plentiful in La Have river this year than for many years past, there being good catches repeatedly made.

Sand Point.—The average catch of salmon was fair and this is reported a much better season than for the past five years. The fishing is improving yearly.

FROM INSPECTOR KINNEY'S REPORT.

King's County exhibits a phenomenally large run of salmon, the increased take was 200 per cent over the catch of 1892. In the county of Digby the increase was 300 per cent, whilst Shelburne exhibits a shortage.

Overseer Reed of Wolfville regrets that the Gaspereaux River is not as productive as desired, but believes that the large take of salmon in the bay is attributable to the planting of former years.

Overseer Miller says: The coves were swarming with young salmon, as many as 300 to 400 being taken at one tide. These fish weigh from 5, 6, 7 lbs. each, and it is thought they are the product of the hatchery.

Overseer Bailey states that white-fish and salmon trout, the product of the Bedford hatchery, are making their appearance in this district.

FROM INSPECTOR HOCKIN'S REPORT.

The increase in the salmon fishery has been almost wholly in those counties bordering on the Bay of Fundy, where the catch has been unusually large, and the largest recorded for the last fifteen years.

In Guysboro' County there is a decrease of 1,200 lbs., while in Halifax County 8,500 lbs. were taken in excess of the last year. Antigonish County shows a decrease, while Pictou County shows an increase of 3,700 lbs.

Inspector Bertram says: The statistics give a total increase in the salmon fishing over 1892 of 28,750 lbs. of fresh, salted and canned fish, which he attributes to the protection afforded the various runs by the department, and the increase in the number of the policemen.

Respectfully submitted.

SAMUEL WILMOT,
Chief Supt. Fish Culture of Canada.

APPENDICES.

REPORTS OF THE OFFICERS IN CHARGE OF FISH-BREEDING ESTABLISHMENTS IN THE SEVERAL PROVINCES OF CANADA, FOR 1893.

1.—FRASER RIVER HATCHERY.

PROVINCE OF BRITISH COLUMBIA.

REPORT OF THE OFFICER IN CHARGE FOR 1893.

SIR,—I have the honour, in submitting the annual report of proceedings in connection with the Fraser River Fish Hatchery, under my charge, of recording a very successful season's operations.

During last March and April I distributed 5,764,000 sockeye salmon fry as follows:—

March 20th, Pit Lake.....	740,000
do 25th do	600,000
do 27th, Nicomikle River	50,000
April 1st, Harrison River.....	1,200,000
do 11th do	1,387,000
do 19th, Stave River.....	650,000
do 24th, Harrison River.....	1,087,000
do 24th, Squamish River.....	50,000

No eggs were got from or sent to other hatcheries.

The parent fish captured were all of the sockeye, "Nerka" variety. No record of the number from which ova was taken, was kept, but as the females average about 3,500 eggs each, the number must have been about 2,000 females and 1,500 males.

The number of eggs collected and laid in the hatchery during the season of 1893 was 6,880,000.

The eggs were received at the hatchery from Morris Creek, Harrison River, on the following dates:—

October 3rd.....	2,100,000
do 7th.....	1,224,000
do 14th.....	1,000,000
do 20th.....	1,288,000
do 27th	1,368,000
	<hr/>
	6,880,000

I am not in a position to state definitely the result of planting the fry in the various waters. More than half of the fry from the Fraser River hatchery have always been planted in Harrison River, which is the most suitable place available, but at the season when it is necessary to put out the young fish, the water is so low in the river, that it is impossible to get up the rapids on the Harrison, with the scows and although there is not a question in regard to the great benefit which has resulted from planting the fry, where of necessity it has to be done, still many persons believe that the benefits would be greater if the hatchery were situated above the rapids, in which case, both the Harrison Lake and river, and their numerous affluents would be made more accessible; and also many other suitable streams in which fry could be

planted. The present hatchery, building and plant are getting considerably out of repair, for in the expectation that at any time during the last three years the present hatchery would be removed, as little as possible has been spent in repairs,—only such as was absolutely necessary to ensure the success of the seasons operations.

If it be determined to operate the present hatchery for another season, extensive repairs will be required, and an almost entirely new outfit of plant and appliances will be necessary; without knowing whether the present hatchery will be operative another season, or that a new one will be built at Harrison or elsewhere, it is impossible to submit any satisfactory suggestions regarding its maintenance or improving the present establishment. The success of a hatchery to be considered as a factor in keeping up a supply of fish, is not to be measured by the number of ova laid down or successfully hatched, but it is from the number of fry which may be successfully planted in suitable places for food and shelter, and where there is an absence of predatory fishes.

The facilities and appliances for planting the young fish are also very important considerations in connection with the prosperity of a hatchery. Numerous letters have been received and visits have been made by gentlemen interested in the salmon fishing of Alaska and the Columbia River in the United States enquiring about the capacity and the general working of the Fraser River hatchery, all of whom expressed the opinion that, to the successful operations at the Fraser River hatchery is mainly attributable the unusually successful catches of salmon on the Fraser River during the present and past seasons.

JOHN McNAB,
Officer in charge.

2.—SYDNEY, CAPE BRETON, HATCHERY.

PROVINCE OF NOVA SCOTIA.

REPORT OF OFFICER IN CHARGE FOR 1893.

SIR,—In respect to the present position of the hatchery and its efficiency for future work, I beg to say that new troughs are necessary, and some general repairs all around will be required to make the hatchery efficient for future work.

The above facts are all that I can say in this report, and all that I think is necessary, owing to the hatchery not being in operation the past year.

W. J. DUNLOP,
Sydney Fish Hatchery.

3.—BEDFORD HATCHERY.

PROVINCE OF NOVA SCOTIA.

REPORT OF OFFICER IN CHARGE FOR 1893.

SIR,—I have the honour herewith to submit a report upon the operations at the Bedford hatchery for the portion of the year 1893, while this institution was under my charge.

No instructions having been given during the fall of 1892, to secure a supply of ova from the rivers of Nova Scotia for this hatchery, I was obliged to await a supply from other sources.

During the month of March I received from the hatcheries in Ontario 3,000,000 whitefish ova and 750,000 salmon-trout ova, and from the Miramichi hatchery a further supply of 350,000 salmon ova.

These were hatched and distributed as follows:—

SALMON.

Indian River, Halifax county.....	20,000
Nine Mile River, Halifax county.....	20,000
Fall do do	20,000
Philip do Cumberland county.....	40,000
Annapolis do Annapolis county.....	40,000
Le Quille do do	20,000
Le Quille W Branch do	20,000
Round Hill, do do	20,000
Gaspereau River, King's county.....	40,000
Gold do Lunenburg county.....	20,000
Middle do do	20,000
Le Have do do	40,000
Total salmon	320,000

SALMON-TROUT.

Lake Thomas, Halifax county.....	20,000
Lake William do	20,000
Hubley's Lake do	40,000
Rocky do do	40,000
Paradise Lakes, Annapolis county.....	40,000
Total salmon-trout.....	160,000

WHITEFISH.

Grand Lake, Halifax county.....	300,000
Hubley's Lake do	300,000
Lake Thomas do	300,000
Lake William do	300,000
Paradise Lakes, Annapolis county.....	300,000
Beeler's do do	300,000
Round Hill Lake do	300,000
Loon Lake, King's county.....	300,000
Lake George do	300,000
Total whitefish.....	2,700,000

TOTALS.

Salmon.....	320,000
Salmon-trout	160,000
Whitefish	2,700,000
Grand total distribution.....	3,180,000

During the summer season some necessary repairs were effected, and the fences around the grounds in part renewed, all trays, tanks, troughs, etc., were repainted, and put in condition for further use, and on the 6th November, when I left to take charge of the Newcastle hatchery in Ontario, everything about the hatchery was in fair condition.

A. B. WILMOT,

Former officer in charge Bedford Hatchery.

NOTE.—The report of Mr. Ogden, successor to Mr. Wilmot, at the Bedford hatchery is herewith attached.

3.—CONTINUED.

SIR,—On the 15th November last, I took charge of the Bedford Hatchery, having been previously engaged at Merigomish, capturing and spawning parent salmon for this hatchery, a full report of operations there has been sent to the department.

There were 54 salmon taken, 19 males and 35 females. The latter when spawned, yielding about 300,000 eggs, which were laid down in troughs in the month of November and are now doing well. A set of new hatching troughs will be required next season, as the old ones are very tender and past repairing.

Some repairs are absolutely necessary about the exterior of the main building, such as new eavestroughs around the whole building, some repairs to the roof, and probably a coat of paint to prevent decay.

The storehouse and workshop requires to be reshingled as the roof is entirely gone.

I have made new storm doors and put up temporary eavestroughs for the winter, but in early spring the above repairs should be effected.

ALFRED OGDEN.

Officer in charge, Bedford Hatchery N.S.

4.—ST. JOHN RIVER HATCHERY.

PROVINCE OF NEW BRUNSWICK.

Report of the Officer in charge for 1893.

SIR,—I have the honour, herewith, to submit the annual report of transactions at the fish-breeding establishment under my supervision for the year 1893.

As previously stated in my report for last year, being assisted by Mr. A. B. Wilmot of the Bedford Hatchery, there was collected at the Carleton Pond, St. John harbour, 885,000 salmon eggs, they were carefully conveyed to the hatchery, and placed in troughs in the usual manner. In the month of March following I received a further supply of ova from the Sandwich and Newcastle hatchery Ontario, consisting of 3,000,000 whitefish and 1,000,000 salmon trout, brought over in charge of Mr. William Parker, they arrived in good condition, and continued to do well all through the winter and yielded a good percentage of young fry in the spring, which were all distributed in good order, and planted in the different lakes and waters hereinafter specified :

Distribution of whitefish fry.

Harvey Lake, York County.....	560,000
Oromocto Lake do do	320,000
Lake George do do	240,000
Lake Yohoe do do	240,000
Foster Lake, Charlotte do	320,000
Lakeville, Carleton do	320,000
Jone's Lake " do	320,000
Long Lake, Victoria do ...	160,000
Byram Pond, Madawaska County.....	120,000

Total whitefish..... 2,600,000

Salmon-Trout Fry.

Lakeville Lake, Carleton County.....	24,000
Jones Lake do do	24,000
Gumiac Lake do do	24,000
Lake Disappointment, Queen's County.....	24,000
Oromocto Lake, York County.....	24,000
Lake George do do	24,000
Lake Killarney do do	24,000
Oromocto Lake do do	24,000
Long Lake, Victoria County.....	18,000
Byram Pond do do	18,000
Lakes Temiscouata and Squatook, Temiscouata Co., P. Q.	24,000
Portage Lake, Victoria County	18,000
Ball's Lake, St. John County.....	24,000
Total salmon-trout.....	294,000

Sea Salmon Fry.

Oromocto River, York County	40,000
Magaguadavic River, York County	40,000
Skiff Lake and River do	40,000
Lake Alva, Musquash River, King's County.....	40,000
Tobique River, Victoria County.	30,000
St. John River, at and near the hatchery.....	175,000
Total sea salmon.....	365,000

Speckled Trout Fry.

F. R. Armstrong, St. John.....	15,000
George McAvery do	10,000
Jeremiah Holt, for Skiff Lake.....	5,000
Rapides des Femmes Brook, near the hatchery.....	10,000
Total speckled trout.....	40,000

Recapitulation.

Number of whitefish distributed.....	2,600,000
Number of salmon-trout distributed.....	294,000
Number of sea-salmon distributed.....	365,000
Number of speckled-trout distributed.....	40,000
Grand total of fry distributed 1893.....	3,299,000

This large quantity of fry of the different species was distributed at great distances from the hatchery to comply with the numerous applications made for them causing a vast amount of labour and care, and consequent expense, notwithstanding all this the work was safely and satisfactorily done.

COLLECTING SALMON EGGS.

About the 15th of last October, instructions were sent from the Chief Superintendent of fish culture to proceed to the Carleton Pond to assist Mr. Alexander Mowat from the Restigouche hatchery in taking the eggs from the salmon impounded there. On

the 27th October, I reached Carleton with my assistant, and found Mr. Mowat there when the necessary preparations were made for manipulating the parent salmon. On the 28th we commenced operations and continued collecting and packing the eggs until the evening of the 31st. On the 1st of November I left for the hatchery with three cases, containing about 600,000 eggs, leaving Mr. Mowat and my assistant at the reservoir in St. John to finish taking the eggs. On the 7th of November they arrived at the hatchery with the balance, making in all about 1,400,000 eggs, these were placed in the hatchery troughs in good condition. The total number of salmon manipulated at the reservoir was: females 228, males 75, total 303. The females were nearly three to one of the males. At present the eggs are looking fairly well, there is a good prospect that a good percentage of them will produce fry next spring. The embryo is now quite perceptible in them. Everything is working very satisfactorily in the hatchery, and there is a good supply of water.

REPAIRS.

No repairs are needed in the interior of the house beyond those already ordered by the department, namely, sheathing one side of house from the floor to the window-sill, so as to correspond with rest of the work; repairing the plaster on the ceiling which is considerably broken; the want of material prevented this work being done the past season, but it will have to be attended to early next summer after the young fry are put out. The repairing of the main dam was also ordered, but too late to have it done this season; there was temporary work done to make it answer this winter.

INCREASE OF FISH.

It appears to be the general opinion, in this part of the country, that the artificially hatched fry put out from this house has increased the supply of fish in the waters where they were planted; and in stocking some lakes with whitefish and salmon-trout where they never existed before; evidence of this statement is shown by the increased number of applications now made for fry for both public and private waters. The salmon has surprisingly increased in the upper waters of the St. John River, and its tributaries, especially in the Tobique River where there is a remarkable increase, both in numbers and size of the fish. Last July I met Colonel Tucker, returning after a few days' fishing from the Tobique River, he had 27 salmon with him, one twenty-seven pounds weight. Another gentleman, from the United States, caught thirty-seven salmon in the same river. Others made good catches, but the particulars did not come to my knowledge. Good protection with the help of the hatcheries will soon establish a reputation for our rivers here.

CHAS. McCLUSKEY,
Officer in Charge.

5.—MIRAMICHI HATCHERY—PROVINCE OF NEW BRUNSWICK.

Report of the officer in charge for 1893.

SIR,—I have the honour to submit herewith my annual report for the year 1893. It is encouraging to report that this has been another year of success for this institution and all who are interested in the fisheries on this river, agree that if the present methods, and careful management are followed, the future success of this hatchery will assuredly follow the great benefits which have already resulted therefrom.

By referring to the annual report for 1892, it will be seen that at the time of its date there was in the hatchery troughs 1,425,000 salmon ova. According to instructions received from the department, Mr. A. B. Wilmot, of the Bedford, N.S., hatch-

ery, took from this nursery at the proper time for carrying them 300,000 to the Bedford establishment, leaving a balance of 1,125,000 ova to be distributed in out Miramichi waters. In addition to this, 200,000 salmon ova were obtained from the Restigouche Hatchery, making the total number of salmon ova in this hatchery amount to 1,325,000. Very gratifying results were met with in the hatching of this large amount of eggs. The total loss from the time of gathering until distributing, was very small, leaving 1,275,000 fry for distribution.

They were planted in a vigorous and healthy condition in the following streams:—

In the North-west Miramichi at "Camp Adams" and North-west Falls (Restigouche fry).....	200,000
North-west Miramichi, from Camp Adams to O'Shea's Beaches (Miramichi fry).....	350,000
Little South-west Miramichi (Miramichi fry).....	250,000
Sevogle River (Miramichi fry).....	150,000
Renous River do	50,000
Main South-west Miramichi, from Doaketown upwards (Miramichi fry).....	250,000
Stewart's Brook.....	25,000

Total number distributed	1,275,000
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Owing to the warm weather during the time of distribution, great care had to be taken of the fry while in the cans, especially when carrying them by rail. However, none but trifling losses were met with, and it is safe to assert that the fry were never planted in a healthier condition.

CAPTURE OF PARENT FISH.

During the month of August, the retaining pond was enlarged and water deepened, so that better accommodation might be given the parent fish. New nets having been procured and everything put in readiness, operations were commenced on 7th September, and on the 18th October the work was completed, little more than a month having elapsed from the time of commencement, a full supply of fish were obtained. They were procured from the old fishing stands in the non-tidal waters of the North-west and little South-west Miramichi. From the North-west branch there were obtained 135 females and 100 males, and from the Little South-west, 100 females and 75 males, making the total of 240 females and 170 males. The season was fairly favourable for our work, the only drawback being several small freshets which caused fishing to be suspended for a few days. Grilse were very plentiful, and the men engaged at the work state that salmon were never so plentiful since operations were first commenced at this hatchery.

The total amount expended in procuring this number of fish amounted to \$510.81. This includes the cost of obtaining new nets and repairing old ones, as well as repairing crates, canoes and shanties for men. These items, which amounted to about \$75, should properly have been charged to the repairing account. But including these, it will be seen that the average cost of each fish was slightly below \$1.25.

COLLECTION OF OVA.

Spawning season set in early in October, the first fish being stripped on the 23rd of that month. This is earlier than the work usually commences at this hatchery.

With the exception of ten fish, which were liberated before spawning commenced, the ova was delivered by all in a healthy looking condition. The total number of ova obtained was 1,575,000—showing the average number delivered by each fish to be about 6,850.

Following are the dates on which the work of stripping was performed, and the number of ova obtained each day:—

Date.	No. of fish stripped.	No. of ova obtained.
October 23	32	224,000
24	29	203,000
25	40	272,000
26	70	468,000
27	37	257,000
30	15	105,000
31	3	20,000
Nov. 4	4	26,000
Totals	230	1,575,000

This number of ova were placed in the hatchery and remain in a healthy looking condition.

It might here be added that if any other hatchery is not fully supplied, it would be advisable to remove at least 300,000, so that better accommodation would be given the remainder at hatching time.

REPAIRS.

During the month of August the repairing that was ordered by the department was commenced—a complete set of new hatching troughs were placed in the house, as well as a new supply tank, which, with the new metal taps, makes quite an improvement, both in efficiency and appearance. The underground waste-water pipes were also taken up and replaced by new ones. The inside walls of the hatching room were ceiled and the troughs and tanks given a fresh coat of paint, and everything generally brightened up. The total cost of this work amounted to \$286. Unless some unforeseen accident occurs, no further repairing will be required about the building or dams for a few years, excepting the outbuildings, some of which are in a very unserviceable condition. Estimates have been forwarded for the building of a new coal and storage shed, which is very much needed. This, together with the repairing of nets, crates, distributing cans, and other details, will necessitate an outlay during the coming year of about \$200.

GENERAL REMARKS.

In conclusion, I may say that this hatchery and its appliances in general are of a satisfactory condition, and that the institution enjoys the approval and sanction in the public, which it has earned for itself, and fish culture in general, by the evident benefits which it has conferred upon our rivers, and which are apparent in the splendid condition of the salmon fishery for the last three or four years, after a fair trial the hatchery now stands in greater favour than ever before, and it must be claimed that this is evidence of the good condition of the fishery and the popularity of this artificial work, for if the fishery were decreasing instead of increasing, there are some who would be only too proud to place it in a bad light before the public. But everything is against opinions of this kind. The past season has been the best for years for the salmon fishermen, and what better evidence is needed than to have the river full of fish nearly all the time. This great improvement in the fishery is generally conceded, by all our fishermen and others interested, to be the work of the hatchery, coupled with the improved protection now extended to our streams by the department during the fishing season, as well as a thorough protection of the parent fish and spawning grounds on most of the streams during close season.

It is therefore not unreasonable to say that if this good protection is continued together with the benefits yearly derived from the hatchery, that the salmon fishery of this river is fully assured to remain in a healthy and remunerative condition for further years.

Submitting the above for your consideration.

ISAAC SHEASGREEN,
Officer in charge, Miramichi Hatchery.

6.—RESTIGOUCHE HATCHERY, PROVINCE OF QUEBEC.

Report of the Officer in charge for 1893.

SIR,—I beg to submit herewith a report of proceedings as carried on at the Restigouche Hatchery during the past year.

One million one hundred and ten thousand eggs were collected in the fall of 1892, from which were hatched 1,083,000 fry, which were distributed in the various rivers and streams as follows :—

Kedgwick River.....	200,000
From hatchery to mouth Kedgwick	223,000
Upsalquitch River.....	150,000
Metapedia River and Lake	200,000
Parker's Lake.....	10,000
Number of eyed eggs transported to Miramichi establishment.....	200,000
Total.....	1,083,000

The above numbers of fry were all towed as usual to their destination in floating crates, and were planted out in very fine condition. No other kinds of eggs, but those of the sea-salmon were hatched in the Restigouche hatchery the past year.

COLLECTING EGGS IN 1893.

The work of reconstructing the retaining pond at Tide Head began the 20th of May, and the two Government nets were placed in fishing order on June 1st and 12th, the total catch being as follows, viz. :—

	Salmon.	Grilse.
Murray Island net	297	29
Pett's Creek net.....	42	12
Purchased from M. Adams.....	111	0
Do George Duff.....	10	0
Total.....	460	41

Thirty-one of these fish died from fungoid disease and were buried, the loss occurred after the fish were deposited in the retaining pond. Many of the fish being injured by escaping through the nets in the tide way below. According to the daily diary which was kept, 429 fish should still be remaining in the pond, but when they were gathered down in the fall for the collection of the eggs, only 405 spawning fish could be obtained ; 173 female and 232 males, from which were collected 1,430,000, an average of about 8,000 eggs per fish, the manipulation began on the 16th of October and continued until the 7th of November. All the eggs were conveyed to the hatchery in boats by water, and no loss was met with, and the eggs are in a fine healthy condition at the present time. The young fish being perfectly formed in the egg, a successful hatch can be guaranteed. A very large number of small young fish were handled at the pond this season, reducing the average number of eggs from

10 to about 8,000 per fish. The majority of the parent fish were marked by inserting a hole through the tail and adipose fin with a sharp punch. This is likely, however, to grow up as soon as the fish returns to sea.

REPAIRS TO HATCHERY.

The supply dam with pipe and flues and the floor of hatching room were thoroughly repaired during the summer. Also troughs, tanks and trays were varnished, and the whole machinery put in first-class order for the reception of the ova in the fall, and as the plant is now in a good state of preservation, very little repairs will be required for another year's operations.

THE RETAINING POND AT TIDE-HEAD.

This pond must be reconstructed every spring, and removed again in the fall, --a difficult work to do--difficult because of a high freshet about the 15th of May, when the work of constructing the pond must be proceeded with in order to have it ready for the reception of the first run of fish, difficult because of the strong current and muddy water at this date. It is, therefore, rather chance work of making it perfectly close at the bottom in order to prevent the escape of the fish, especially when it is an authenticated fact, that salmon will work themselves underneath the nets in the gravel and sand, and even leap several feet over the top of a net in order to escape. The inclosure is built 15 feet high at either end, with timbers and lattice work, and must be sufficiently strong to withstand freshets and high tides, and yet allow the free circulation of water. A number of new gates were put in use last season, and some new wire-netting made. A few slight repairs may be needed in the spring, and some new net stakes and small mesh net will be required, and a new fishing canoe, this will be about all the improvements necessary for the practical working of the establishment another year.

THE CAPTURE OF PARENT FISH.

As I have stated before upon this depends the entire success or failure of the whole work of fish culture here. It is quite evident that the system of capturing parent fish, at both the Restigouche and St. John cannot be improved upon unless to increase the numbers of fish caught. As for instance, 405 fish were manipulated at the Restigouche establishment, and 303 at the Carleton pond, St. John River, total 708 fish, yielding 2,830,000 eggs. All of which are a clear gain to the rivers, because if they had not been taken for breeding purposes they would have been marketed and the eggs totally lost. There has been some opposition to the system of taking parent fish for the Restigouche nursery, but the grievance was only imaginary, and agitated for a cause by interested parties. The fishermen, unfortunately for themselves, from some selfish motive are too apt to overlook the very thing that may be to their best interest.

Let us see what the results would be, providing there were no Government nets operated at Tide Head. The 54 fish caught in the northside net at Pett's Creek would have passed up river for the numerous anglers to have had a share of. The 121 fish purchased from Messrs. Adams and Duff, would have been marketed, and the 249 caught by the Government net at Murray Island, would have been caught in Mr. Duff's net, which is set immediately above, as there would be no chance for their escape these would also have been marketed. These 370 fish and upwards of 1,000,000 of eggs were thus saved to the river by the operation of the Government nets for the benefit of both netters and anglers, and when the artificial culture of salmon and other fishes has been proven to be of great benefit to the general public in Canada and elsewhere in the world, why should the fancied opposition of a few individuals from selfish motives be allowed to interfere with a work of such importance to the fishing industry.

RESULTS OF THE ARTIFICIAL HATCHING.

The beneficial results of the work now carried on in this Dominion and also throughout the world having been so well demonstrated, that very little new proof may be added. The fact of the prosperous condition of our rivers here, with their increase of fish from year to year, and the thousands of parent salmon to be seen on the spawning beds up river in the fall are sufficient evidence of the utility of this artificial work. Salmon are also increasing in numbers in many of the tributary streams of the Restigouche, where fry have been planted from this nursery, and it is the almost unanimous verdict of boatmen and guardians on the rivers that the spawning fish were never more plentiful than they were this fall.

HATCHERY FRY ARE NOT ALL EATEN UP AS ALLEGED.

A few salmon fry were planted in the Parker Lake four years ago. This lake is situated three miles from the town of Campbelltown, and is a great resort for anglers for trout fishing. It was generally held by those unacquainted with the natural instincts of the young salmon to escape from their enemies, that they would all be eaten up in this lake by the trout and other predaceous fish inhabiting its waters. This opinion has been overcome by the fact of a number of (smolt) young salmon weighing about a pound each having been caught in this land-locked lake during the past season, and that hundreds of the smaller young salmon could be seen leaping all over the lake.

THE RESTIGOUCHE AND CALIFORNIA SALMON.

Both the above species were handled by me at the Carleton reservoir at St. John harbour during the collection of the eggs for the St. John hatchery this fall. The California salmon were very distinctly and differently marked from those of the native Atlantic fish, and undoubtedly are the results of the 150,000 California fry that were planted in the headwaters of the St. John River in 1882. I had charge of the institution at the time, and this consignment of semi-hatched eggs were originally obtained from the Sacramento (California) hatchery, and sent on by Mr. Superintendent Wilmot to the St. John river hatchery. Consignments of the Restigouche fry have also been planted in the St. John River and its tributaries on several occasions. It is from these causes that the large 30-pound salmon are now caught in the St. John river, as well as the few California salmon above referred to.

Having been despatched by orders from the department to assist Officer McClusky last fall in manipulating the salmon in the Carleton reservoir at the St. John harbour, and to assist in transporting the eggs up river to the St. John River hatchery, Mr. John Mowat, of Campbellton, was directed to perform my work at the Restigouche hatchery, I therefore submit herewith his report of operations in collecting the eggs for that nursery:—

CAMPBELLTON, 20th November, 1893.

TO ALEX. MOWAT,
Officer of Restigouche Hatchery.

SIR,—After your departure to St. John, I took charge of your work at the salmon pond at Tide Head, according to your instructions. I handled the parent fish by putting them in the cribs and taking some 300,000 eggs which, together with the former lot, making in all twenty cases, were despatched by scow to your Dee Side hatchery, and the following day I saw a portion of them laid in the troughs in prime condition. The week following the balance of fish unspawned was manipulated and the eggs sent to the hatchery by canoe. The parent fish are all liberated in good condition; the pond stripped of its timber and screens; the boats, cribs, small scow, and all appliances were hauled up and stowed away for another year. The season for the work was favourable, only one very cold day occurring. From

all accounts I have been able to collect from guardians, boatmen and others, the spawning beds on the Restigouche River and its tributaries showed very large numbers of breeding fish, much more than usual.

JOHN MOWAT.

All of which is respectfully submitted.

ALEX MOWAT,

Officer in charge of Restigouche Hatchery.

7.—GASPÉ HATCHERY—PROVINCE OF QUEBEC.

Report of the Officer in charge for 1893.

SIR,—I beg to submit the report of operations connected with the above hatchery during the past year. Work in Dartmouth River was commenced on the 20th May, and preparations were made for the season's business. Scows and flats were repaired and other necessary arrangements made. The nets were set on the 1st and 2nd of June, and were kept in the Dartmouth River until 19th August, and captured 89 salmon. According to instructions, I purchased 29 more from Wm. Stanley at the current price of \$2 each, making in all 118 fish. Of these we discovered, when seining and cribbing them on 9th October, that four had died in the pond during the summer months, leaving 114, which consisted of 77 females and 37 males.

The collecting of eggs continued from 10th October to 11th November, yielding as follows:—

20 females averaged	15,000 eggs, 300,000 in all.
20 do	12,000 eggs, 240,000 do
37 do	10,000 eggs, 370,000 do

Total..... 910,000

These were all placed in the hatchery in good order. The parent salmon were taken back to the main river in scows and liberated in good condition. The planting of the fry of the spring's crop was commenced on the 20th of June and completed on the 15th of July. The following statement shows the number of salmon fry bred and planted out during the year, and their location:—

St. John River.....	220,000
York River.....	40,000
Dartmouth River, above falls.....	295,000
do below falls	100,000
	<hr/>
	395,000

Total 655,000

The transportation of the 295,000 above the falls in the Dartmouth River caused increased expenditure, but these fry with all others were most satisfactorily planted in their respective places. The hatchery is in first class condition. The troughs and trays were varnished and the interior of the hatchery was painted and cleaned and aired. The appliances were also fully prepared for the winter's work. The scows and cribs were all safely housed for another year. The outside of the building was also painted during the months of July and August last.

The Department net was set this year as before, and the anglers were well satisfied with it. The close season was faithfully observed. Considerable satisfaction was expressed by the lessees of the St. John's River at Gaspé, with the remarkable abundance of salmon taken in it this year; their catch with the fly being over 100. The upper waters of the Dartmouth and York rivers were also fairly well supplied with parent fish. The salmon fry were seen in the upper water of the Dartmouth river in large numbers.

HENRY DAVIS,

Officer in charge of Gaspé Fish Hatchery.

8.—TADOUSAC HATCHERY, PROVINCE OF QUEBEC.

Report of the Officer in charge for 1893.

Herewith is submitted the annual report on the operations of the Tadoussac hatchery for the past year. From the eggs obtained in the fall of 1892, were hatched 2,060,000 fry and distributed in the following waters:—

Old Mill River, Chicoutimi county	300,000
A. Mars do do	200,000
St. John do do	200,000
St. Margaret River, by salmon stream, Saguenay county.	200,000
Baude do by Chisholm do do	500,000
Baude do by Perron do do	300,000
Mowat's Lakes, Saguenay county	300,000
Hatchery do do	60,000
	<hr/>
	2,060,000

The planting of fry for the Upper Saguenay in the county of Chicoutimi, was done with the assistance of the tug-boat "Belle," owned by the firm of Price Bros. & Co., and the fry planted in the vicinity of the hatchery was done by carting. For the first time 200,000 fry were put in the salmon stream discharging into the St. Margaret River, north-east branch; there was only one place where it was possible to reach this stream by making a road down a hill. As usual the two departmental nets were set in May, and caught three hundred and twenty-two parent salmon. They were kept in the retaining pond for breeding purposes until ready to spawn. In that number there were two hundred and two females. They gave two million, ninety-four thousand two hundred eggs, which are now on the trays in the breeding-room and looking remarkably well, and judging from present appearances the distribution of salmon fry next season will be as large as the past season. The general opinion held by the net fishermen is that the Tadousac hatchery has maintained the steady catch of salmon in this district for many years past. A proof of the efficiency of this hatchery is in the great number of young salmon that are seen in the rivers and lakes where they have been planted during the past years. For the people not inclined to believe in the beneficial work of fish hatcheries they drive to the Mowat's Lakes, near Tadousac, where they will see any amount of young salmon from eight to twelve inches long. These young salmon were not known in these lakes until after the fry were put there from this hatchery. They are found there now in thousands. These lakes discharge into the St. Lawrence and Saguenay, by which means these young salmon reach the Gulf and sea to arrive at maturity; when they return again to the Saguenay and its branches for breeding purposes. During the summer the large tank in the breeding-room and the troughs and trays were painted and varnished in readiness for the fall operations. From the break of the old dam the water used in the old hatchery building for spawning purposes was cut off, and to supply this want a small building with a tank of 4 x 18 feet was built just over the stream which runs from the hatchery lake, and quite near the salmon pond where the parent fish are kept. The spawning of the fish for their eggs began on the 23rd of October and ended on the 8th of November. As already reported the repairs to the dam of the salmon pond ordered last spring could not be made on account of the material required from Quebec arriving too late. The material required, deals, spikes, &c., being on hand, the repairs will be made in the first days of April, before the water rises in the lake.

The 8-inch conductor pipe, under the contract, should be put down by contractor Nesbitt early next summer, not later than the first of July when the lake can be lowered to put it down. Nesbitt should be made to do this to fill his contract. It will be necessary for the department to give orders to have the dam at the lake

raised about 18 inches, which must also be done early in the summer to give time for the lake to fill up again before the fall.

Appended will be found the cost of constructing an auxiliary hatchery at Chicoutimi and running it. This is a necessity for the well working of this hatchery as it will economize expense and ensure greater results in the end.

The expense of building this auxiliary hatchery at Chicoutimi would not exceed \$400, and its annual maintenance, including fuel, labour and attendance would not exceed \$300. In this way the benefits from salmon breeding on the Saguenay would be greatly enlarged, and an output of 3,000,000 of fry in the Saguenay waters instead of about 2,000,000 as at present; and the distribution of the fry in the upper branches of the river could then be accomplished safely, expeditiously and cheaply, when from the long and doubtful means of conveying the fry up river by steamboats, now pursued, these upper waters cannot be reached except at the risk of losing many of the fry and at great expense.

L. N. CATELLIER,
Officer in Charge Tadousac Hatchery.

December 31st, 1893.

9.—MAGOG HATCHERY, PROVINCE OF QUEBEC.

Report of the officer in charge for 1893.

Herewith is submitted the following report of the Magog Fish Hatchery for the past year 1893:—

There were received in this hatchery in March last 3,000,000 whitefish eggs and 1,500,000 salmon trout eggs, eighty per cent of which were hatched and deposited in good condition, in the following bodies of water, viz.:—

Memphremagog Lake,	Counties of Stanstead and Brome,
Brome and Oxford Lakes,	Counties of Sherbrooke and Brome,
Megantic Lake,	County of Megantic,
Joliette	do Richmond,
Key Pond	do Sherbrooke,
Massawippi	do Stanstead.

All of the above-named eggs were received from the Newcastle and Sandwich hatcheries, in Ontario. No parent fish were captured for the use of this hatchery during the past year.

The hatchery is in good condition and will require little or no repairs for the coming year.

Good accounts are given of the increase in salmon trout and whitefish in the sheets of water where the fry have been deposited.

It is, however, urged that more efficient protection should be given to salmon trout during the close season. A marked improvement in the last two years is shown, but there is still room for more.

All of which I respectfully submit.

A. H. MOISE,
Caretaker.

10.—NEWCASTLE HATCHERY, PROVINCE OF ONTARIO.

Report of the officer in charge for 1893.

Herewith is submitted the following report upon the operations at this hatchery during the past year.

From information obtained from records in this office, it appears that in the autumn of 1892, 8,475,000 salmon trout ova were obtained at Wiarton, and deposited in the troughs of this hatchery, and that, subsequently, 3,000,000 whitefish ova were received from the hatchery at Sandwich, as also a further addition of 500,000 speckled trout ova from Mr. Ford, of the Credit Forks Trout Hatchery, making a grand total of 11,975,000.

During the month of February the distribution of semi-hatched ova, took place as follows:—

SALMON TROUT OVA.

Magog, Que.....	1,500,000
Bedford, N.S.....	1,000,000
St. John, N.B.....	1,000,000
St. John's, Nfld.....	100,000
Total.....	3,600,000

SPECKLED TROUT.

St. John, New Brunswick.....	45,000
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Making a total of 3,645,000 eyed ova disposed of that season, and leaving a balance of about 8,330,000 ova still on the troughs of this institution.

The hatching of this large number of ova was very satisfactory, as was also their final distribution, which was performed, in accordance with the orders of the Department, as per the following schedule.

WHITEFISH.

Bay of Quinté, Belleville.....	500,000
do Picton.....	700,000
Lake Ontario, Cobourg.....	300,000
do Toronto.....	400,000
Lake Simcoe, Barrie.....	200,000
Lake Couchiching, Orillia.....	200,000
Georgian Bay, Midland.....	500,000
Total.....	2,800,000

SPECKLED TROUT.

R. W. Standly, Grafton, Ont.....	10,000
F. G. Hughes, Galt, Ont.....	10,000
Jos. Goldie, Guelph, Ont.....	15,000
Rathbun Co., Deseronto, Ont.....	15,000
Geo. Moore, Ancaster, Ont.....	10,000
Wm. Menger, St. Jacobs, Ont.....	10,000
Cyrus Teal, Woder, Ont.....	5,000
A. S. Hardy, Toronto, Ont.....	60,000
Shaw & Shaw, Walkerton, Ont.....	45,000
David Gilmore, Trenton, Ont.....	200,000
H. A. Ward, Port Hope, Ont.....	5,000
Total.....	385,000

SALMON TROUT.

Lake Simcoe, Barrie, Ont...	200,000
Lake Couchiching, Orillia...	200,000
Georgian Bay, Midland, Ont...	300,000
do Wiarton, Ont.....	500,000
do Collingwood, Ont.....	300,000
Bay of Quinté, Belleville, Ont.....	350,000
do Picton, Ont.....	200,000
do Consecon	100,000
Lake Ontario, Toronto, Ont...	350,000
do Cobourg, Ont.....	250,000
do Newcastle, Ont.....	600,000
do Hamilton, Ont.....	300,000
Hall's Lake, Aurora.....	100,000
Rosseau Lake, Muskoka.....	100,000
Huntsville do do	100,000
Haliburton do do	100,000
Beaver do do	100,000
Total.....	4,150,000

GRAND TOTALS.

White fish.....	2,800,000
Speckled trout.....	385,000
Salmon trout.....	4,150,000
Semi-hatched eggs sent away.....	3,645,000
Grand total.....	10,980,000

These fish were despatched to their respective waters in charge of a special messenger from this hatchery and I am informed, that notwithstanding the long distances to which some of them were transported, no loss was sustained. In two lots of speckled trout, which were shipped by express without a special messenger in charge and at the risk of the consignees, some loss was met with.

COLLECTION OF OVA.

On my arrival here from Nova Scotia on the 9th of October last, I found that Mr. Kennific, acting under orders from the department, had gone to Wiarton to prepare the nets, scows and other appliances for this season's operations, I accordingly went on to that point to take part in this work and found on my arrival that the stakes for the two nets had been driven and one net had been set, on the following day the remaining net was set and fishing was commenced at once. On the 13th, the day on which the nets were first raised, we found that about thirty fish had entered them, and on the 16th, when the first ova was obtained, there was about 250 fish in the two nets. We were favored with very fine and warm weather throughout the whole fishing season and succeeded in capturing in all about 3,000 salmon trout from which we obtained about 9,000,000 ova. Of this number 1,250,000 were delivered to Mr. Walker for the Ottawa hatchery, leaving 8,000,000 to be deposited in the troughs of this hatchery. At present these ova are doing well and in those collected during the early portion of the season the embryos are distinctly observable and I have reason to believe a very large portion of the stock has been thoroughly vitalized, and I can see nothing to prevent a successful hatching.

REPAIRS.

So far as I have been able to observe in the short time I have had charge of this hatchery, it is in a fairly good state of efficiency for its work. The flume and gates at the head of the raceway have become somewhat decayed and I think it would be advisable to have them repaired during the coming summer, but no other repairs of any importance are immediately required.

IMPROVEMENTS.

I would suggest that the following improvements be added to this hatchery [1st. The building of a small ice house convenient to or possibly attached to the one end of the store room. By experience in transporting fry of the different species, in other provinces, it has been found that ice was absolutely indispensable to the safe carrying of young fish to any considerable distance and the same has been found to have been the case here. Although the water used in transporting fish from here, being spring water and much colder, yet during the warm weather generally prevailing during the performance of this work, to prevent sickening and loss of fish ice must be used. Heretofore, ice has been procured from parties in Newcastle, but that supply is not always certain or convenient and consequently it is recommended that a small building suitable for the purpose be erected alongside the hatchery here where a supply would be always immediately at hand.

2nd. The removal of the iron nursing tanks, proposed to be done by the former officer in charge, from their present locations, and arranging them in a group alongside the hatchery, between the building and the stream. There is ample room there for them all, and it would in every way be much more economical in handling and attending to the young fry than at present with these tanks, distributed so far away from the hatchery.

The above improvements it will be found would very materially add to the success of the work at this hatchery and lessen the annual outlay for labour and expenditure.

GENERAL REMARKS.

Before closing this report I might be permitted to say that since becoming in a measure acquainted with the extent and value of the salmon trout fisheries of the lakes, and especially of the Georgian Bay, and the possibility and desirability of increasing that wealth by artificial culture, it is suggested that much greater and more extensive efforts should be put forth to that end. The comparatively small number of fry planted from this one hatchery over such an extent of water as has been covered in the past cannot produce such satisfactory results as would be desirable.

Wiarton, on an arm of this bay, offers every facility for the extension of fish-cultural operations. Being centrally located on the south shore of the bay in the immediate vicinity of the most frequented natural spawning grounds, no difficulty would be met with in securing large quantities of ova, which, after being hatched there, could be readily distributed over all parts of the coast.

The fishermen and others interested in fisheries in that vicinity heartily appreciate the past efforts of the department in their behalf, yet a feeling exists that at the most these efforts are comparatively small, and a general desire is expressed that a hatchery of large proportions and capable of turning out millions of these young fish annually should be erected there at an early date.

The Buffalo Fish Company, an American corporation operating in Canada, handled during the past season over 3,000,000 pounds of fish of all kinds, all of which were caught in the Georgian Bay. These fish were purchased from the fishermen at the average price of six cents per pound, making an outlay of say \$180,000, which, together with the expenses incurred in storing and handling this

large quantity would probably increase the sum to \$200,000 per year. It will therefore be understood how valuable those fisheries are, and it will be conceded that all interested have a just right to be solicitous as to the future welfare of this great source of wealth and industry and with what justice they appeal to the Government to institute such means as will retain to them and their descendants this blessing.

A. B. WILMOT,
Officer in charge Newcastle Hatchery.

11.—SANDWICH HATCHERY, PROVINCE OF ONTARIO.

Report of the Officer in charge of the Hatchery, for the year 1893.

Herewith is presented the annual report of the work of this establishment for the past year.

The last year's report showed that there was gathered in the fall of that year some 95,000,000 eggs, from which were turned out 68,000,000 young white-fish and semi-hatched eggs, all of which were disposed of as shown in the following tables:—

EYED EGGS.

Newcastle, Ont	3,000,000
Ottawa, do	6,000,000
St. John, N.B.	3,000,000
Bedford, N.S.	2,000,000
Magog	3,000,000
Total.....	17,000,000

YOUNG FRY.

Point Edwards, Lake Huron	2,000,000
River St. Clair.....	1,000,000
Mitchell's Bay, Lake St. Clair..	3,000,000
Peach Island, Lake St. Clair.	2,000,000
Belle Isle, Detroit River.....	2,000,000
Fighting Island, Detroit River.....	5,000,000
In the Bay below Fighting Islands.....	2,000,000
Stoney Island, Detroit River.....	2,000,000
Bois Blanc Island.....	3,000,000
In Lake Erie, below Bois Blanc.....	2,000,000
Pigeon Bay, Lake Erie.....	2,000,000
Barr Point do	2,000,000
Colchester do	2,000,000
Kingsville do	1,000,000
Leamington do	1,000,000
Port Stanley do	1,000,000
Hamilton, Lake Ontario	1,000,000
Toronto do	1,000,000
Niagara do	1,000,000
In Detroit River at Hatchery	15,000,000
Making the total.....	68,000,000

The Department having the control of five fishing stations on the river had all the privileges necessary for catching a large number of fish, and were enabled to capture 13,500 parent fish, from which sufficient eggs were procured to fill the hatchery to its full capacity of 95,000,000.

The following are the stations where the fish were captured, and the number of eggs obtained at each fishing ground :

	White Fish caught.	Eggs taken.
Bois Blanc Islands.....	1,800	13,000,000
No. 1 Pier Fighting Islands. ...	3,600	25,000,000
No. 2 do do	2,300	19,000,000
No. 3 do do	3,100	24,000,000
No. 4 do do	1,700	14,000,000
Total	13,500	95,000,000

It will thus be seen that there were captured 13,500 parent fish, a much greater number than was required to fill the house with eggs as it will not properly hold more than ninety-five millions; a large number of the fish were liberated as they were not required for the hatchery. These eggs were put in the jars in a good healthy condition and are now doing well, and will no doubt yield a large crop of young fish at the hatching time next spring.

The weather was severe and stormy in this section of the country this fall. The frosts set in so early and made the work of catching and handling fish a very severe one as well as more expensive.

The catch of fish all along this section was up to the average standard, and from all reports received the belief is that the fish bred by this establishment are gradually on the increase. To bear out this statement copies of two letters have been received from fishermen who have always been opposed to the hatchery.

Copy of Letters.

SANDWICH, ONT., December 27th, 1893.

TO WILLIAM PARKER,
Manager of the Sandwich Fish Hatchery.

DEAR SIR,—You will please allow me to make you a statement in regard to the hatchery and the fishing in our lakes and rivers. I have been fishing for over twenty-five years and the scarcity of the fish had driven me out of the business entirely for the last four years, but I still take a great interest in the fisheries and fish hatching artificially. I have noticed for the last two years that whitefish and pickerel are showing a great increase. In the season of 1892, there was a large catch of whitefish in Lake Erie, more than the four previous years together; the season of 1893 was still better, so I have come to the conclusion that the hatchery must be a great success. Pickerel this last season were extra good in River St. Clair, but herring and perch have almost disappeared, there was but very few these last three years, and they have not been hatched artificially; so the hatchery deserves credit for the whitefish and pickerel which have increased. You will allow me to state to you a cause why the general reports of the fishermen show a decrease of fish. The fisheries of Lakes Erie and St. Clair are controlled by American firms under Canadian names and the fish are taken away at night with tugs and only about one load out of five is reported to the Department for fear they might be limited in their catch. I compliment you in having the hatchery so well stocked with spawn this season, and I hope that instead of turning the parent fish loose after they are spawned the department will order them to be given to the poor.

Yours truly,

JOS. D. MELOCHE.

SANDWICH, ONT., December 27th, 1893.

TO WILLIAM PARKER,
Superintendent Sandwich Hatchery.

DEAR SIR,—I am glad to state to you that I think you have caught more fish this season than in the season of 1892, also the fishermen of Lake Erie have caught more whitefish this year than the two previous years, so I may say that the fish breeding establishment is doing some good. Hoping that you will continue that institution.

Yours truly,

F. MELOCHE,
Fisherman.

CONDITION OF THE HATCHERY.

The hatchery is in good working order and very little or no repairs are needed at the present time.

At Bois Blanc Island, there will be some necessary expense in moving the shanties and fixing the hangs further up to the head of the Island. The water in the river is getting lower and lower each year, and will necessitate this moving. There is also another important thing to be done by removing a number of hangs or stones, which are in the way of the nets, at the bottom of the river, while fishing. The whole cost of this work would be in the neighbourhood of \$100.

Under the head of remarks, it is suggested that the department should have a boat for doing the work of transferring the eggs from the islands to the hatchery, and taking the fry from the hatchery to the waters, where they are to be planted. It would be a great addition and saving to this hatchery to have a boat at its own disposal, without being at the risk of leasing one, at high prices, when required. The one that was hired last season is a splendid boat and could be got very cheaply, probably for about \$900.

The repairs done at Bois Blanc Island last season were of great service in getting eggs. If it had not been done, we could not have secured any eggs there last fall, as the waters have changed, and are entirely different from what they were a few years ago.

WM. PARKER,
Officer in charge, Sandwich Hatchery.

12.—OTTAWA HATCHERY, PROVINCE OF ONTARIO.

Report of the Officer in charge, 1893.

SIR,—I beg to submit the annual report of the operations carried on at the Ottawa hatchery for the year 1893.

On the 14th November, 1892, were received from the Newcastle hatchery 1,100,000 salmon trout eggs, which were carefully laid down in the troughs of the Ottawa hatchery, and in February, 1893, were also received from the Sandwich hatchery 6,000,000 of whitefish eggs. All the eggs, from both places, were received in first-class condition.

The small fry came out strong and healthy in April and May, and were successfully planted in the following places; the whitefish being deposited by Mr. S. Barbeau, and the salmon-trout by Mr. James Robertson, of the Fisheries Department.

WHITEFISH.

Deschesne Lake.....	680,000
Meaches do	1,640,000
Cornwall, Green Lake.....	480,000
Rivière du Nord, Ste. Scholastique.....	400,000
Lac au Bois Franc.....	160,000
Belleville, Bay Quinté	1,200,000
Picton, Long Lake.....	800,000
Total.....	<u>5,360,000</u>

SALMON TROUT.

Almonte, Green and Long Lake.....	112,000
Johnston Lake.....	48,000
Meache's Lake.....	136,000
Moseau do	80,000
Charleston do	208,000
Little Sand do	64,000
Deschene do	88,000
St. Francis do	80,000
Lac au Bois Franc.....	32,000
Total.....	<u>848,000</u>

The Ottawa hatchery will need no repairs for next season's operations, everything being in good order, as troughs, fish carriers, trays, &c., &c., have all been painted and varnished this summer, but as this hatchery is situated at the seat of Government and being visited during every session of Parliament by the Ministers and Members of Parliament and also by thousands of visitors, I would ask that the walls of the hatchery be whitewashed, and the woodwork painted, and also that the electric light be placed in the hatchery as it is much needed during winter months.

On the 23rd October last, according to your instructions, I left for Newcastle, Ont., to take charge of that hatchery, whilst Mr. A. B. Wilmot, the officer in charge and his men were engaged collecting ova at Wiarton, in the Georgian Bay, and on November 21st I returned to Ottawa bringing with me 1,250,000 salmon trout eggs for the Ottawa Hatchery. These eggs were laid down in the troughs and are doing very well at the present time.

Later on will be received from the Sandwich hatchery the ordinary supply of whitefish eggs, which will be placed as usual in the glass incubators.

JOHN WALKER,
In charge of Ottawa Hatchery.

13.—BAY VIEW LOBSTER HATCHERY, PROVINCE OF NOVA SCOTIA.

Report of Officer in charge, 1893.

Herewith is submitted the report of work done at Bay View Lobster Hatchery for the past season.

In consequence of damage being done to the launching wharf, by ice, during the previous winter, there was considerable delay in placing the suction pipes and getting ready for the season's operations.

On the 22nd of May, everything being in good working order, the first lot of lobster eggs were received from the factory of Messrs. Burnham & Morrell, adjacent to the hatchery, and during the time the hatchery was in operation about one-half of the whole number of eggs received, were taken at this factory.

On the 13th June, fry made their first appearance in the troughs, the temperature of the water being 56° Fh., and they continued to hatch rapidly until the 6th July. When the hatchery was closed, having distributed between the Strait of Canso, Guysboro county, and Cape John, Pictou County, and between Souris, Prince Edward Island, and Charlottetown, P.E.I., 153,600,000 young lobsters, this number is as many as can be conveniently handled in this hatchery.

The steamer "Caberfiedh" was employed for 22 days to collect ova and distribute the lobster fry.

The collections of eggs were made from factories at Cape John, McDonald's Cove, Gull Rock, and Pictou Island and out of all the eggs collected about 75 per cent. were hatched.

It was found necessary to have careful and reliable men stationed at three factories for the purpose of collecting and taking care of the eggs until such time as the steamer would call for them: this work proved highly satisfactory.

I devoted as much of my own time as I could spare from the hatchery, in collecting eggs and distributing fry, which gave me an opportunity of visiting a number of factories.

The lobsters were not found as plentiful this year as they have been for the last three or four years. The fish caught after the 1st July are inferior in size and quality to those caught earlier in the season.

The hatchery is now in good working order, having repaired the landing wharf, foundation to building and constructed drain troughs from the water pipes.

The new 6-inch iron suction pipe has proved satisfactory and all expectations fully realized in its working.

If no accident occurs to the wharf during the coming winter an early commencement can be made next season, and another large crop of young lobsters will no doubt be turned out of the hatchery.

During this season the hatchery was visited, and the operations witnessed by some distinguished scientists, notably Professors Rathbone and Smith, of the United States Fishery Commission and Professor Borrachine, of St. Petersburg, Russia. These gentlemen appeared to be highly delighted with their visit and were somewhat surprised at the magnitude of the works.

ALFRED OGDEN,
Officer in Charge.

14.—SELKIRK HATCHERY, PROVINCE OF MANITOBA.

Report of the Officer in Charge, 1893.

SIR,—I have the honour of sending my first annual report as officer in charge of the Dominion Fish Hatchery at Selkirk, of which I was superintendent whilst under construction.

Regarding the proper construction of the building and whilst there has been experienced an unusually cold December, the thermometer being frequently 35 degrees below zero; the precautions taken against frost by the department have proved to be most satisfactory. The back plastering of the walls and the deafening in the floor, with the storm sashes all these making the large hatching room (80 x 40) so warm that the one large stove, with the steam boiler easily keeps the temperature at 50 to 55 degrees which is all that is required. There is now no fear of frost, particularly since the water tank has been closed in upstairs. The jar stands are, where they were ordered to be set, on the south side of the building, and they hold four supply troughs, and four off-take troughs, with eight jar stands, four on each side, each holding 60 jars. The stands are built in the most substantial manner, the troughs are made of the best British Columbia fir, a wood which swells little or any with water, and is stiffer and freer from knots or shakes, than white pine. The joints of the troughs are all put together with cotton strips and white lead and securely nailed so that when filled with water there was no leakage; the shelves for the jars are also substantially made and the troughs were well varnished with parafine varnish. The breeding troughs for the trout trays were also finished and varnished, but the jar stand and trout trough were only primed on the outside and will require a couple of coats of paint before next fall's work begins.

The steam pump is working satisfactorily, giving all the water required. The boiler is in a satisfactory condition, but there is considerable risk to depend upon it to work for six months, night and day, without cleaning, when using this alkali water. An auxiliary upright boiler ought, therefore, to be set up for use in case of accident, or when cleaning the large boiler during the winter.

TAKING EGGS.

In taking eggs here this year everything had to be learned, this hatchery being over a thousand miles from where eggs had been before taken, and being so far away from where ordinary assistance could be got, and as the climate, season, water, etc., here were entirely different, the utmost caution had to be observed, and as the department wished economy to be used in everything, the proper outfit of nets and fishing gear was not purchased for this fall's work in catching parent fish, therefore, the offer of the Manitoba Fish Company to assist in every way possible with their nets, at bare cost, was accepted.

On September 6th, the manager and myself went to the lake to select a place to fish, and decided to set a pound net off Grand Marais, about 15 miles down the lake, on the east side, from the mouth of the river, and 40 miles from Selkirk.

There having been several delays from the stormy weather, the stakes were driven and the pound-nets set on the 4th October, and on the morning of the 5th there were twenty-five fish in the nets. Owing to the storms we did not lift again until the 11th October, when there were 255 fish, 105 male and 150 females. We lifted again on the 14th, got 25 male and 100 females. Lifted again on the 15th, male 34, female 100; next lift 17th October, we got male 70, female 136; only one small female being ripe. These fish were placed in the dummy or cage which was made with slats so the water ran freely through it. We commenced spawning the fish on October 18th and got 8 quarts of eggs; on 19th October, collected 32 quarts of eggs; on 20th October, collected 38 quarts of eggs; on 21st October collected 65 quarts of eggs; on 23rd October, collected 20 quarts of eggs; on 24th October, collected 44 quarts of eggs.

On the 26th it commenced storming and freezing very hard, the frost being heavier than experienced for years at the same date. On the 27th October the river at Selkirk was frozen over in many places. On the evening of the 28th, the tug came up to the hatchery with 32 quarts of eggs; and my assistant sent up word that the fish were getting scarce. As it was freezing up very fast it was decided although the boat was liable to be frozen up, to send her out again with a gang of nets to try and strike the fish in deeper water. The tug could not get through the ice in the slough until broken by the steamer "Colville," when the tug started down the river with 15 gill-nets on the 30th October, and she got back on the night of the 3rd of November with 30 quarts of eggs which had been spawned out of the fish left in the "dummy" cage. Mr. Gignac, my assistant, went to Point Matasse and set the fifteen nets and only got five whitefish, all spent. Mr. Gignac had still 500 fish in the "dummy" net, and remained at Grand Marais to take in the pound-net, barely getting it in before the ice took. The fish had stopped running, all having spawned apparently and gone to deep water. He then spawned out what fish he could from the "dummy" which had been set in six feet of water.

The "dummy" net was frozen in with several inches of ice and many of the confined fish had smothered in it for want of air. Mr. Gignac took all the spawn he could, and having an ox team he came through the woods forty miles to Selkirk getting to the hatchery on 9th November with fifty quarts of eggs. A heavy loss was experienced in these eggs, for, though carefully packed in the trays and boxes, the carriage in an ox-waggon over a rough bush road, had shaken them together and smothered many of them, while some were frozen. Generally it is the 10th of November before the river freezes up. But another year provision must be made to have all the eggs required in the hatchery by, at the latest, the 30th of October.

At present writing the eggs are looking as well as I could desire. The growth is slow owing to the steady temperature at freezing point. I hope to keep them from hatching out until the end of April, when they will be much stronger fry and the lakes will be opening out. The cost of taking eggs is somewhat greater than I anticipated. First, from the very stormy and cold weather encountered, and secondly from the loss of the coarse fish from the net, which would, had we been able to have saved them, have nearly paid for the eggs.

LaTOUCHE TUPPER,
Officer in Charge.

Zool.

Zool.

